

**SEARCH REQUEST FORM**

Scientific and Technical Information Center

Requester's Full Name: Nikolay Ushir Examiner #: 71025 Date: 3/20/02  
 Art Unit: 1773 Phone Number 305-2179 Serial Number: 01971896  
 Mail-Box and Bldg/Room Location: CP2 11/01 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*  
 Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

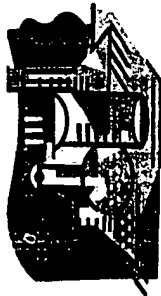
Title of Invention: LaminateInventors (please provide full names): Naoto Ikegawa; Naoyuki Kondo; Kimuki NakataEarliest Priority Filing Date: 6/6/00

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

- ① A Laminate comprising a metal layer formed on the surface of an insulating substrate, wherein the substrate is poly(phthalamide) and contains 20-150 parts by weight of a fibrous filler, wherein the fibrous filler is a titanate, borate or wallastonite having an average length between 20-150 ~~mm~~  $\mu$ m and an average diameter between 1-5  $\mu$ m.
- ② The Laminate of claim 1 where the substrate is nylon 6, nylon 66, poly(phthalamide), polyphenylene sulfide, polyethylene terephthalate, poly(ether ketone), poly(etheramide) or liquid crystal <sup>space</sup> polyester, the fibrous filler is wallastonite <sup>powdery</sup> and the substrate further contains a 1-20  $\mu$ m <sup>as in</sup> ~~unshaped~~ <sup>powdery</sup> filler <sup>(comorphous)</sup> <sup>lie kaolin</sup>.
- ③ Laminate #2 but where the powdery filler is spherical.
- ④ Laminate as in #3 where the fibrous filler is Aluminum borate and the spherical ~~filler~~ filler is silica.
- \* 9: \* \* \* -> See attached.

**STAFF USE ONLY**

Searcher: K. Teller Type of Search: NA Sequence (#) STN 1  
 Searcher Phone #:                      AA Sequence (#)                      Dialog                       
 Searcher Location:                      Structure (#)                      Questel/Orbit                       
 Date Searcher Picked Up: 3/22/02 Bibliographic ✓ Dr. Link                       
 Date Completed:                      Litigation                      Lexis/Nexis                       
 Searcher Prep & Review Time: 2.0 Fulltext                      Sequence Systems                       
 Clerical Prep Time: 98 Patent Family                      WWW/Internet                       
 Online Time:                      Other                      Other (specify)



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*Scientific and Technical Information Center*

## Search Results Feedback Form

The search results generated for your recent request are attached. If you have any questions or comments (compliments or complaints) about the scope or the results of the search, please contact the searcher whose name is circled below.

Kathleen Fuller 308-4290 > Eric Linnell 308-4143 John Calve 308-4139  
All searchers are located in the library in CP3/4 3D62

=&gt; FILE HCAPLU

FILE 'HCAPLUS' ENTERED AT 16:41:07 ON 22 MAR 2002

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FILE COVERS 1907 - 22 Mar 2002 VOL 136 ISS 13

FILE LAST UPDATED: 21 Mar 2002 (20020321/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

The P indicator for Preparations was not generated for all of the CAS Registry Numbers that were added to the CAS files between 12/27/01 and 1/23/02. As of 1/23/02, the situation has been resolved. Searches and/or SDIs in the H/Z/CA/CAplus files incorporating CAS Registry Numbers with the P indicator executed between 12/27/01 and 1/23/02 may be incomplete. See the NEWS message on this topic for more information.

=&gt; D QUE

L5	7254	SEA FILE=REGISTRY ABB=ON	124-09-4/CRN	
L7	21123	SEA FILE=REGISTRY ABB=ON	100-21-0/CRN	- <i>terephthalic acid in a polymer</i>
L8	597	SEA FILE=REGISTRY ABB=ON	L5 AND L7	
L9	5	SEA FILE=REGISTRY ABB=ON	L8 AND 2/NC	- <i>together</i> ↑
L18	3	SEA FILE=REGISTRY ABB=ON	WOLLASTONITE/CN	
L25	8692	SEA FILE=HCAPLUS ABB=ON	L18 OR WOLLASTONITE OR CASIO3	
L27	1	SEA FILE=REGISTRY ABB=ON	KAOLIN/CN	
L28	79	SEA FILE=HCAPLUS ABB=ON	L27	
L29	35375	SEA FILE=HCAPLUS ABB=ON	( L28 OR KAOLIN/BI )	
L31	17963	SEA FILE=HCAPLUS ABB=ON	LAMINAT?(S)METAL?	
L73	199	SEA FILE=HCAPLUS ABB=ON	L9	
L74	6172	SEA FILE=HCAPLUS ABB=ON	L73 OR ?PHTHALAMID?	
L76	0	SEA FILE=HCAPLUS ABB=ON	L74 AND L31 AND L25 AND L29	
L77	0	SEA FILE=HCAPLUS ABB=ON	L74 AND L31 AND L25 AND CLAY#	
L78	0	SEA FILE=HCAPLUS ABB=ON	L76 OR L77	

=&gt;

*no references with  
polyphthalamide and wollastonite  
+ (kaolin or clay) for  
metal laminates*

=> FILE REGISTRY

FILE 'REGISTRY' ENTERED AT 16:08:25 ON 22 MAR 2002  
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STRUCTURE FILE UPDATES: 20 MAR 2002 HIGHEST RN 402467-99-6  
DICTIONARY FILE UPDATES: 20 MAR 2002 HIGHEST RN 402467-99-6

TSCA INFORMATION NOW CURRENT THROUGH July 7, 2001

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Calculated physical property data is now available. See HELP PROPERTIES  
for more information. See STNote 27, Searching Properties in the CAS  
Registry File, for complete details:  
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

The P indicator for Preparations was not generated for all of the  
CAS Registry Numbers that were added to the H/Z/CA/CAplus files between  
12/27/01 and 1/23/02. Use of the P indicator in online and SDI searches  
during this period, either directly appended to a CAS Registry Number  
or by qualifying an L-number with /P, may have yielded incomplete results.  
As of 1/23/02, the situation has been resolved. Also, note that searches  
conducted using the PREP role indicator were not affected.

Customers running searches and/or SDIs in the H/Z/CA/CAplus files  
incorporating CAS Registry Numbers with the P indicator between 12/27/01  
and 1/23/02, are encouraged to re-run these strategies. Contact the  
CAS Help Desk at 1-800-848-6533 in North America or 1-614-447-3698,  
worldwide, or send an e-mail to [help@cas.org](mailto:help@cas.org) for further assistance or to  
receive a credit for any duplicate searches.

=> FILE HCAPLUS

FILE 'HCAPLUS' ENTERED AT 16:08:32 ON 22 MAR 2002  
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FILE COVERS 1907 - 22 Mar 2002 VOL 136 ISS 13  
FILE LAST UPDATED: 21 Mar 2002 (20020321/ED)

This file contains CAS Registry Numbers for easy and accurate  
substance identification.

CAS roles have been modified effective December 16, 2001. Please

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check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

The P indicator for Preparations was not generated for all of the CAS Registry Numbers that were added to the CAS files between 12/27/01 and 1/23/02. As of 1/23/02, the situation has been resolved. Searches and/or SDIs in the H/Z/CA/CAPLUS files incorporating CAS Registry Numbers with the P indicator executed between 12/27/01 and 1/23/02 may be incomplete. See the NEWS message on this topic for more information.

=> D QUE L36

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L12      9067 SEA FILE=REGISTRY ABB=ON 107-21-1/CRN AND 100-21-0/CRN
L13      6 SEA FILE=REGISTRY ABB=ON L12 AND 2/NC
L18      3 SEA FILE=REGISTRY ABB=ON WOLLASTONITE/CN
L22      53533 SEA FILE=HCAPLUS ABB=ON L13
L23      59439 SEA FILE=HCAPLUS ABB=ON L22 OR ?PHTHALAMID?
L25      8692 SEA FILE=HCAPLUS ABB=ON L18 OR WOLLASTONITE OR CASIO3
L27      1 SEA FILE=REGISTRY ABB=ON KAOLIN/CN
L28      79 SEA FILE=HCAPLUS ABB=ON L27
L29      35375 SEA FILE=HCAPLUS ABB=ON ( L28 OR KAOLIN/BI)
L31      17963 SEA FILE=HCAPLUS ABB=ON LAMINAT?(S)METAL?
L32      25 SEA FILE=HCAPLUS ABB=ON L25 AND L31
L34      0 SEA FILE=HCAPLUS ABB=ON L29 AND L32 AND L23
L35      0 SEA FILE=HCAPLUS ABB=ON L31 AND L23 AND L25 AND CLAY#
L36      0 SEA FILE=HCAPLUS ABB=ON L34 OR L35
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=> D QUE L61

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L2      14 SEA FILE=REGISTRY ABB=ON (11121-16-7/BI OR 12047-27-7/BI OR
12049-50-2/BI OR 12673-69-7/BI OR 13983-17-0/BI OR 24968-12-5/B
I OR 25038-54-4/BI OR 25667-42-9/BI OR 31694-16-3/BI OR
32131-17-2/BI OR 7440-50-8/BI OR 7631-86-9/BI OR 88-96-0/BI OR
9003-18-3/BI)
L10      6 SEA FILE=REGISTRY ABB=ON L2 AND PMS/CI
L12      9067 SEA FILE=REGISTRY ABB=ON 107-21-1/CRN AND 100-21-0/CRN
L13      6 SEA FILE=REGISTRY ABB=ON L12 AND 2/NC
L14      1 SEA FILE=REGISTRY ABB=ON "NYLON 6"/CN
L15      1 SEA FILE=REGISTRY ABB=ON "NYLON 66"/CN
L18      3 SEA FILE=REGISTRY ABB=ON WOLLASTONITE/CN
L19      13 SEA FILE=REGISTRY ABB=ON L2 NOT L18
L20      2 SEA FILE=REGISTRY ABB=ON L19 AND (1/B OR 1/TI)
L22      53533 SEA FILE=HCAPLUS ABB=ON L13
L23      59439 SEA FILE=HCAPLUS ABB=ON L22 OR ?PHTHALAMID?
L25      8692 SEA FILE=HCAPLUS ABB=ON L18 OR WOLLASTONITE OR CASIO3
L27      1 SEA FILE=REGISTRY ABB=ON KAOLIN/CN
L28      79 SEA FILE=HCAPLUS ABB=ON L27
L29      35375 SEA FILE=HCAPLUS ABB=ON ( L28 OR KAOLIN/BI)
L31      17963 SEA FILE=HCAPLUS ABB=ON LAMINAT?(S)METAL?
L37      4058 SEA FILE=HCAPLUS ABB=ON L31 AND (L23 OR L10 OR L14 OR L15 OR
PPS OR POLYPHENYLENE(W)SULFIDE OR PET OR POLYETHYLENE TEREPHTHA
LATE OR PEK OR POLYETHER KETONE OR POLYETHER AMIDE? OR PEEK OR
POLYESTER? OR PEEK)
L38      2 SEA FILE=REGISTRY ABB=ON ALUMINUM BORATE/CN
L39      549 SEA FILE=HCAPLUS ABB=ON L38
L40      640986 SEA FILE=HCAPLUS ABB=ON L20 OR ?TITAN? OR ?BORAT? OR ( L39 OR
ALUMINUM BORATE/BI)
L41      384 SEA FILE=HCAPLUS ABB=ON L37 AND (L40 OR L25)
L43      1 SEA FILE=REGISTRY ABB=ON SILICON DIOXIDE/CN
L44      232851 SEA FILE=HCAPLUS ABB=ON L43
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L45 106 SEA FILE=HCAPLUS ABB=ON L41 AND (L29 OR CLAY# OR SIO2 OR  
SILICA OR ( L44 OR SILICON DIOXIDE/BI) )  
L47 9 SEA FILE=HCAPLUS ABB=ON L45 AND METAL? (3A) LAYER? (S) SUBSTRATE?  
L48 6 SEA FILE=HCAPLUS ABB=ON L45 AND INSULAT?  
L49 14 SEA FILE=HCAPLUS ABB=ON L47 OR L48  
L50 1913 SEA FILE=HCAPLUS ABB=ON L31 AND (THERMOPLASTIC? OR THERMOSET?)  
L57 19 SEA FILE=HCAPLUS ABB=ON L50 AND (FIBER? OR FIBROUS) (3A) FILLER?  
L58 1 SEA FILE=REGISTRY ABB=ON SILICON DIOXIDE/CN  
L59 232851 SEA FILE=HCAPLUS ABB=ON L58  
L60 3 SEA FILE=HCAPLUS ABB=ON L57 AND (L29 OR CLAY# OR SIO2 OR  
SILICA OR ( L59 OR SILICON DIOXIDE/BI) )  
L61 16 SEA FILE=HCAPLUS ABB=ON L49 OR L60

=> FILE WPIX

FILE 'WPIX' ENTERED AT 16:09:05 ON 22 MAR 2002  
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FILE LAST UPDATED: 21 MAR 2002 <20020321/UP>  
MOST RECENT DERWENT UPDATE 200219 <200219/DW>  
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> SDI'S MAY BE RUN ON EVERY UPDATE OR MONTHLY AS OF JUNE 2001.  
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SEE HELP COST <<<

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>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES,  
SEE <http://www.derwent.com/dwpi/updates/dwpicov/index.html> <<<

=> D QUE L65

L2 14 SEA FILE=REGISTRY ABB=ON (11121-16-7/BI OR 12047-27-7/BI OR  
12049-50-2/BI OR 12673-69-7/BI OR 13983-17-0/BI OR 24968-12-5/B  
I OR 25038-54-4/BI OR 25667-42-9/BI OR 31694-16-3/BI OR  
32131-17-2/BI OR 7440-50-8/BI OR 7631-86-9/BI OR 88-96-0/BI OR  
9003-18-3/BI)  
L10 6 SEA FILE=REGISTRY ABB=ON L2 AND PMS/CI  
L12 9067 SEA FILE=REGISTRY ABB=ON 107-21-1/CRN AND 100-21-0/CRN  
L13 6 SEA FILE=REGISTRY ABB=ON L12 AND 2/NC  
L14 1 SEA FILE=REGISTRY ABB=ON "NYLON 6"/CN  
L15 1 SEA FILE=REGISTRY ABB=ON "NYLON 66"/CN  
L18 3 SEA FILE=REGISTRY ABB=ON WOLLASTONITE/CN  
L19 13 SEA FILE=REGISTRY ABB=ON L2 NOT L18  
L20 2 SEA FILE=REGISTRY ABB=ON L19 AND (1/B OR 1/TI)  
L22 53533 SEA FILE=HCAPLUS ABB=ON L13  
L23 59439 SEA FILE=HCAPLUS ABB=ON L22 OR ?PHTHALAMID?  
L25 8692 SEA FILE=HCAPLUS ABB=ON L18 OR WOLLASTONITE OR CASIO3  
L27 1 SEA FILE=REGISTRY ABB=ON KAOLIN/CN  
L28 79 SEA FILE=HCAPLUS ABB=ON L27  
L29 35375 SEA FILE=HCAPLUS ABB=ON ( L28 OR KAOLIN/BI)  
L31 17963 SEA FILE=HCAPLUS ABB=ON LAMINAT? (S) METAL?  
L32 25 SEA FILE=HCAPLUS ABB=ON L25 AND L31  
L34 0 SEA FILE=HCAPLUS ABB=ON L29 AND L32 AND L23

L35 0 SEA FILE=HCAPLUS ABB=ON L31 AND L23 AND L25 AND CLAY#  
L37 4058 SEA FILE=HCAPLUS ABB=ON L31 AND (L23 OR L10 OR L14 OR L15 OR  
PPS OR POLYPHENYLENE(W)SULFIDE OR PET OR POLYETHYLENE TEREPHTHA  
LATE OR PEK OR POLYETHER KETONE OR POLYETHER AMIDE? OR PEEK OR  
POLYESTER? OR PEEK)  
L38 2 SEA FILE=REGISTRY ABB=ON ALUMINUM BORATE/CN  
L39 549 SEA FILE=HCAPLUS ABB=ON L38  
L40 640986 SEA FILE=HCAPLUS ABB=ON L20 OR ?TITAN? OR ?BORAT? OR ( L39 OR  
ALUMINUM BORATE/BI)  
L41 384 SEA FILE=HCAPLUS ABB=ON L37 AND (L40 OR L25)  
L43 1 SEA FILE=REGISTRY ABB=ON SILICON DIOXIDE/CN  
L44 232851 SEA FILE=HCAPLUS ABB=ON L43  
L45 106 SEA FILE=HCAPLUS ABB=ON L41 AND (L29 OR CLAY# OR SIO2 OR  
SILICA OR ( L44 OR SILICON DIOXIDE/BI) )  
L47 9 SEA FILE=HCAPLUS ABB=ON L45 AND METAL?(3A)LAYER?(S)SUBSTRATE?  
  
L48 6 SEA FILE=HCAPLUS ABB=ON L45 AND INSULAT?  
L49 14 SEA FILE=HCAPLUS ABB=ON L47 OR L48  
L50 1913 SEA FILE=HCAPLUS ABB=ON L31 AND (THERMOPLASTIC? OR THERMOSET?)  
  
L57 19 SEA FILE=HCAPLUS ABB=ON L50 AND (FIBER? OR FIBROUS) (3A)FILLER?  
  
L58 1 SEA FILE=REGISTRY ABB=ON SILICON DIOXIDE/CN  
L59 232851 SEA FILE=HCAPLUS ABB=ON L58  
L60 3 SEA FILE=HCAPLUS ABB=ON L57 AND (L29 OR CLAY# OR SIO2 OR  
SILICA OR ( L59 OR SILICON DIOXIDE/BI) )  
L62 0 SEA FILE=WPIX ABB=ON L34 OR L35  
L63 7 SEA FILE=WPIX ABB=ON L49 OR L60  
L64 4 SEA FILE=WPIX ABB=ON L63 AND (METAL?(3A)LAYER?)  
L65 4 SEA FILE=WPIX ABB=ON L62 OR L64

=> FILE COMPENDEX

FILE 'COMPENDEX' ENTERED AT 16:09:28 ON 22 MAR 2002  
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FILE LAST UPDATED: 19 MAR 2002 <20020319/UP>  
FILE COVERS 1970 TO DATE.

=> D QUE L67

L2 14 SEA FILE=REGISTRY ABB=ON (11121-16-7/BI OR 12047-27-7/BI OR  
12049-50-2/BI OR 12673-69-7/BI OR 13983-17-0/BI OR 24968-12-5/B  
I OR 25038-54-4/BI OR 25667-42-9/BI OR 31694-16-3/BI OR  
32131-17-2/BI OR 7440-50-8/BI OR 7631-86-9/BI OR 88-96-0/BI OR  
9003-18-3/BI)  
L10 6 SEA FILE=REGISTRY ABB=ON L2 AND PMS/CI  
L12 9067 SEA FILE=REGISTRY ABB=ON 107-21-1/CRN AND 100-21-0/CRN  
L13 6 SEA FILE=REGISTRY ABB=ON L12 AND 2/NC  
L14 1 SEA FILE=REGISTRY ABB=ON "NYLON 6"/CN  
L15 1 SEA FILE=REGISTRY ABB=ON "NYLON 66"/CN  
L18 3 SEA FILE=REGISTRY ABB=ON WOLLASTONITE/CN  
L19 13 SEA FILE=REGISTRY ABB=ON L2 NOT L18  
L20 2 SEA FILE=REGISTRY ABB=ON L19 AND (1/B OR 1/TI)  
L22 53533 SEA FILE=HCAPLUS ABB=ON L13  
L23 59439 SEA FILE=HCAPLUS ABB=ON L22 OR ?PHTHALAMID?  
L25 8692 SEA FILE=HCAPLUS ABB=ON L18 OR WOLLASTONITE OR CASIO3  
L27 1 SEA FILE=REGISTRY ABB=ON KAOLIN/CN  
L28 79 SEA FILE=HCAPLUS ABB=ON L27  
L29 35375 SEA FILE=HCAPLUS ABB=ON ( L28 OR KAOLIN/BI)

L31 17963 SEA FILE=HCAPLUS ABB=ON LAMINAT?(S)METAL?  
L37 4058 SEA FILE=HCAPLUS ABB=ON L31 AND (L23 OR L10 OR L14 OR L15 OR  
PPS OR POLYPHENYLENE(W)SULFIDE OR PET OR POLYETHYLENE TEREPHTHA  
LATE OR PEK OR POLYETHER KETONE OR POLYETHER AMIDE? OR PEEK OR  
POLYESTER? OR PEEK)  
L38 2 SEA FILE=REGISTRY ABB=ON ALUMINUM BORATE/CN  
L39 549 SEA FILE=HCAPLUS ABB=ON L38  
L40 640986 SEA FILE=HCAPLUS ABB=ON L20 OR ?TITAN? OR ?BORAT? OR ( L39 OR  
ALUMINUM BORATE/BI)  
L41 384 SEA FILE=HCAPLUS ABB=ON L37 AND (L40 OR L25)  
L43 1 SEA FILE=REGISTRY ABB=ON SILICON DIOXIDE/CN  
L44 232851 SEA FILE=HCAPLUS ABB=ON L43  
L45 106 SEA FILE=HCAPLUS ABB=ON L41 AND (L29 OR CLAY# OR SIO2 OR  
SILICA OR ( L44 OR SILICON DIOXIDE/BI) )  
L47 9 SEA FILE=HCAPLUS ABB=ON L45 AND METAL?(3A)LAYER?(S)SUBSTRATE?  
L48 6 SEA FILE=HCAPLUS ABB=ON L45 AND INSULAT?  
L49 14 SEA FILE=HCAPLUS ABB=ON L47 OR L48  
L50 1913 SEA FILE=HCAPLUS ABB=ON L31 AND (THERMOPLASTIC? OR THERMOSET?)  
L57 19 SEA FILE=HCAPLUS ABB=ON L50 AND (FIBER? OR FIBROUS) (3A)FILLER?  
L58 1 SEA FILE=REGISTRY ABB=ON SILICON DIOXIDE/CN  
L59 232851 SEA FILE=HCAPLUS ABB=ON L58  
L60 3 SEA FILE=HCAPLUS ABB=ON L57 AND (L29 OR CLAY# OR SIO2 OR  
SILICA OR ( L59 OR SILICON DIOXIDE/BI) )  
L67 0 SEA FILE=COMPENDEX ABB=ON L49 OR L60

=> FILE INSPEC

FILE 'INSPEC' ENTERED AT 16:09:52 ON 22 MAR 2002

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FILE LAST UPDATED: 18 MAR 2002 <20020318/UP>

FILE COVERS 1969 TO DATE.

=> D QUE L71

L2 14 SEA FILE=REGISTRY ABB=ON (11121-16-7/BI OR 12047-27-7/BI OR  
12049-50-2/BI OR 12673-69-7/BI OR 13983-17-0/BI OR 24968-12-5/B  
I OR 25038-54-4/BI OR 25667-42-9/BI OR 31694-16-3/BI OR  
32131-17-2/BI OR 7440-50-8/BI OR 7631-86-9/BI OR 88-96-0/BI OR  
9003-18-3/BI)  
L10 6 SEA FILE=REGISTRY ABB=ON L2 AND PMS/CI  
L12 9067 SEA FILE=REGISTRY ABB=ON 107-21-1/CRN AND 100-21-0/CRN  
L13 6 SEA FILE=REGISTRY ABB=ON L12 AND 2/NC  
L14 1 SEA FILE=REGISTRY ABB=ON "NYLON 6"/CN  
L15 1 SEA FILE=REGISTRY ABB=ON "NYLON 66"/CN  
L18 3 SEA FILE=REGISTRY ABB=ON WOLLASTONITE/CN  
L19 13 SEA FILE=REGISTRY ABB=ON L2 NOT L18  
L20 2 SEA FILE=REGISTRY ABB=ON L19 AND (1/B OR 1/TI)  
L22 53533 SEA FILE=HCAPLUS ABB=ON L13  
L23 59439 SEA FILE=HCAPLUS ABB=ON L22 OR ?PHTHALAMID?  
L25 8692 SEA FILE=HCAPLUS ABB=ON L18 OR WOLLASTONITE OR CASIO3  
L27 1 SEA FILE=REGISTRY ABB=ON KAOLIN/CN  
L28 79 SEA FILE=HCAPLUS ABB=ON L27  
L29 35375 SEA FILE=HCAPLUS ABB=ON ( L28 OR KAOLIN/BI)  
L31 17963 SEA FILE=HCAPLUS ABB=ON LAMINAT?(S)METAL?  
L32 25 SEA FILE=HCAPLUS ABB=ON L25 AND L31  
L34 0 SEA FILE=HCAPLUS ABB=ON L29 AND L32 AND L23



L35 0 SEA FILE=HCAPLUS ABB=ON L31 AND L23 AND L25 AND CLAY#  
 L37 4058 SEA FILE=HCAPLUS ABB=ON L31 AND (L23 OR L10 OR L14 OR L15 OR  
 PPS OR POLYPHENYLENE(W)SULFIDE OR PET OR POLYETHYLENE TEREPHTHA  
 LATE OR PEK OR POLYETHER KETONE OR POLYETHER AMIDE? OR PEEK OR  
 POLYESTER? OR PEEK)  
 L38 2 SEA FILE=REGISTRY ABB=ON ALUMINUM BORATE/CN  
 L39 549 SEA FILE=HCAPLUS ABB=ON L38  
 L40 640986 SEA FILE=HCAPLUS ABB=ON L20 OR ?TITAN? OR ?BORAT? OR ( L39 OR  
 ALUMINUM BORATE/BI)  
 L41 384 SEA FILE=HCAPLUS ABB=ON L37 AND (L40 OR L25)  
 L43 1 SEA FILE=REGISTRY ABB=ON SILICON DIOXIDE/CN  
 L44 232851 SEA FILE=HCAPLUS ABB=ON L43  
 L45 106 SEA FILE=HCAPLUS ABB=ON L41 AND (L29 OR CLAY# OR SIO2 OR  
 SILICA OR ( L44 OR SILICON DIOXIDE/BI) )  
 L47 9 SEA FILE=HCAPLUS ABB=ON L45 AND METAL?(3A)LAYER?(S)SUBSTRATE?  
  
 L48 6 SEA FILE=HCAPLUS ABB=ON L45 AND INSULAT?  
 L49 14 SEA FILE=HCAPLUS ABB=ON L47 OR L48  
 L50 1913 SEA FILE=HCAPLUS ABB=ON L31 AND (THERMOPLASTIC? OR THERMOSET?)  
  
 L57 19 SEA FILE=HCAPLUS ABB=ON L50 AND (FIBER? OR FIBROUS)(3A)FILLER?  
  
 L58 1 SEA FILE=REGISTRY ABB=ON SILICON DIOXIDE/CN  
 L59 232851 SEA FILE=HCAPLUS ABB=ON L58  
 L60 3 SEA FILE=HCAPLUS ABB=ON L57 AND (L29 OR CLAY# OR SIO2 OR  
 SILICA OR ( L59 OR SILICON DIOXIDE/BI) )  
 L69 0 SEA FILE=INSPEC ABB=ON L34 OR L35  
 L70 0 SEA FILE=INSPEC ABB=ON L49 OR L60  
 L71 0 SEA FILE=INSPEC ABB=ON L69 OR L70

=> DUP REM L61 L65

FILE 'HCAPLUS' ENTERED AT 16:10:17 ON 22 MAR 2002  
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 PROCESSING COMPLETED FOR L61  
 PROCESSING COMPLETED FOR L65

L72 20 DUP REM L61 L65 (0 DUPLICATES REMOVED)

=> D L72 ALL 1-20 HITSTR

L72 ANSWER 1 OF 20 HCAPLUS COPYRIGHT 2002 ACS  
 AN 2002:15845 HCAPLUS  
 DN 136:86860  
 TI Fabrication of antireflective film by forming a corroded metal layer  
 IN Iwama, Isao; Omo, Noriaki  
 PA Nissha Printing Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM B32B015-08  
 ICS B32B015-08; B29C045-14; B32B007-02; G02B001-11; B29K101-00;  
 B29L007-00; B29L009-00; B29L011-00  
 CC 38-3 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 56

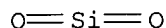
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002001867	A2	20020108	JP 2000-192062	20000627
AB	Title antireflective film is fabricated by <b>laminating</b> on (A) a transparent <b>substrate</b> (e.g., an acrylic resin), (B) an adhesive <b>layer</b> (acrylic), (C) corroded <b>metal layer</b> (aluminum), (D) printed layer (acrylic gravure), (E) releasing layer (UV-cured epoxy), (F) low reflective layer (alternate between <b>silica</b> and <b>titania</b> ), and (G) antistaining layer (fluorine-contg. silane). Thus, layers (E)-(B) were sequentially formed on a <b>PET</b> film and transferred to a transparent substrate in an injection-mold, and finally layers (f) and (G) were formed on top of layer (E).				
ST	corroded aluminum deposition film antireflective laminate				
IT	Epoxy resins, uses RL: TEM (Technical or engineered material use); USES (Uses) (UV-cured; as releasing layer for antireflective laminate)				
IT	Coating materials (antistaining; for laminated antireflective film)				
IT	Laminated plastics, uses RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (as antireflective film)				
IT	Acrylic polymers, uses RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (as transparent substrate for antireflective laminate)				
IT	Antireflective films (contg. corroded metal layer)				
IT	Silanes RL: TEM (Technical or engineered material use); USES (Uses) (fluoro; as antistaining coating material for laminated antireflective film)				
IT	<b>Polyesters</b> , miscellaneous RL: MSC (Miscellaneous) (for transfer-molding of antireflective film)				
IT	Molding of plastics and rubbers (transfer; in prepn. of antireflective laminate)				
IT	Vapor deposition process (vacuum; of <b>metal</b> layer for antireflective <b>laminate</b> )				
IT	13463-67-7, <b>Titania</b> , uses RL: TEM (Technical or engineered material use); USES (Uses) (alternate with <b>silica</b> as low-reflective layer for antireflective laminate)				
IT	7631-86-9, <b>Silica</b> , uses RL: TEM (Technical or engineered material use); USES (Uses) (alternate with <b>titania</b> as low-reflective layer for antireflective laminate)				
IT	7429-90-5, Aluminum, uses RL: TEM (Technical or engineered material use); USES (Uses) (corroded vacuum-deposited <b>metal</b> layer for antireflective <b>laminate</b> based on)				
IT	25038-59-9, <b>PET (polyester)</b> , miscellaneous RL: MSC (Miscellaneous) (for transfer-molding of antireflective film)				
IT	7631-86-9, <b>Silica</b> , uses				

RL: TEM (Technical or engineered material use); USES (Uses)  
 (alternate with **titania** as low-reflective layer for  
 antireflective laminate)

RN 7631-86-9 HCAPLUS

CN Silica (7CI, 8CI, 9CI) (CA INDEX NAME)



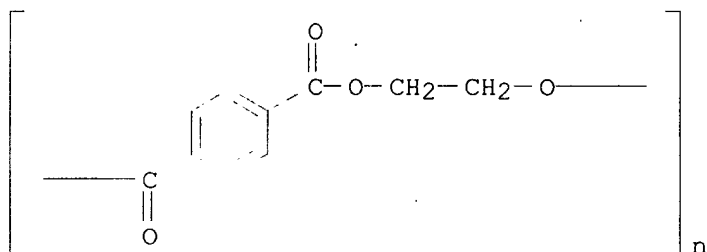
IT 25038-59-9, PET (polyester), miscellaneous

RL: MSC (Miscellaneous)

(for transfer-molding of antireflective film)

RN 25038-59-9 HCAPLUS

CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI) (CA INDEX NAME)



L72 ANSWER 2 OF 20 HCAPLUS COPYRIGHT 2002 ACS

AN 2001:713755 HCAPLUS

DN 135:274111

TI Polybutadiene- and polyisoprene based **thermosetting** compositions  
 as circuit board substrates

IN Landi, Vincent R.

PA World Properties, Inc., USA

SO PCT Int. Appl., 31 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM H05K001-03

CC 39-9 (Synthetic Elastomers and Natural Rubber)

Section cross-reference(s): 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001072095	A2	20010927	WO 2001-US40338	20010321
	WO 2001072095	A3	20020131		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				

PRAI US 2000-531947 A 20000321

AB The flame retardant compns., curable at low temp. and having improved

stability in dielec. const. and mech. properties with thermal aging, comprise: (A) a **thermosetting** polybutadiene or polyisoprene resin, (B) up to 20% (based on total resins) a ethylene propylene rubber with mol. wt. <50,000, (C) 20-60 phr flame retardant, (D) up to 50 vol% fabric, (E) up to 65 vol% filler and (E) effective amt. of peroxide curing agent, and a circuit board comprises a substrate from title compn. and a conductive **metal** layer, e.g., copper layer, **laminated** to the substrate.

- ST polybutadiene polyisoprene flame retardant **thermosetting** compn; ethylene propylene rubber low temp curable compn; copper conductive layer circuit board
- IT Styrene-butadiene rubber, properties  
RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(block, Kraton D-KX 410CS; polybutadiene- and polyisoprene based **thermosetting** compns. as circuit board substrates)
- IT Styrene-butadiene rubber, properties  
RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(block, diblock, Kraton D 1118X; polybutadiene- and polyisoprene based **thermosetting** compns. as circuit board substrates)
- IT Styrene-butadiene rubber, properties  
RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(block, triblock, Vector 8508D; polybutadiene- and polyisoprene based **thermosetting** compns. as circuit board substrates)
- IT EPDM rubber  
RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(dicyclopentadiene-ethylene-propene, Trilene 54; polybutadiene- and polyisoprene based **thermosetting** compns. as circuit board substrates)
- IT Glass **fibers**, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(**filler**; polybutadiene- and polyisoprene based **thermosetting** compns. as circuit board substrates)
- IT Butadiene rubber, properties  
RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(of 1,2-configuration, B 3000; polybutadiene- and polyisoprene based **thermosetting** compns. as circuit board substrates)
- IT Printed circuit boards  
(using polybutadiene- and polyisoprene based **thermosetting** compns. as substrate)
- IT Polymer blends  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(using polybutadiene- and polyisoprene based **thermosetting** compns. as substrate)
- IT 9003-17-2  
RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(butadiene rubber, of 1,2-configuration, B 3000; polybutadiene- and polyisoprene based **thermosetting** compns. as circuit board)

- substrates)
- IT 7440-50-8, Copper, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(conductive layer; polybutadiene- and polyisoprene based  
**thermosetting** compns. as circuit board substrates)
- IT 7631-86-9, CE 44I, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(filler, CE 44I; polybutadiene- and polyisoprene based  
**thermosetting** compns. as circuit board substrates)
- IT 409-21-2, Silicon carbide, uses 1304-56-9, Beryllia, uses 1309-48-4,  
Magnesia, uses 1344-28-1, Alumina, uses 10043-11-5, Boron nitride,  
uses 12047-27-7, Barium titanate, uses 12060-59-2, Strontium titanate  
13463-67-7, Titanium dioxide, uses 24304-00-5, Aluminum nitride  
RL: MOA (Modifier or additive use); USES (Uses)  
(filler; polybutadiene- and polyisoprene based **thermosetting**  
compns. as circuit board substrates)
- IT 32588-76-4, BT 93WFG  
RL: MOA (Modifier or additive use); USES (Uses)  
(flame retardant, BT 93WFG; polybutadiene- and polyisoprene based  
**thermosetting** compns. as circuit board substrates)
- IT 25034-71-3, Dicyclopentadiene-ethylene-propenecopolymer  
RL: PEP (Physical, engineering or chemical process); POF (Polymer in  
formulation); PRP (Properties); TEM (Technical or engineered material  
use); PROC (Process); USES (Uses)  
(rubber; polybutadiene- and polyisoprene based **thermosetting**  
compns. as circuit board substrates)
- IT 106107-54-4  
RL: PEP (Physical, engineering or chemical process); POF (Polymer in  
formulation); PRP (Properties); TEM (Technical or engineered material  
use); PROC (Process); USES (Uses)  
(styrene-butadiene rubber, block, Kraton D-KX 410CS; polybutadiene- and  
polyisoprene based **thermosetting** compns. as circuit board  
substrates)
- IT 106107-54-4  
RL: PEP (Physical, engineering or chemical process); POF (Polymer in  
formulation); PRP (Properties); TEM (Technical or engineered material  
use); PROC (Process); USES (Uses)  
(styrene-butadiene rubber, block, diblock, Kraton D 1118X;  
polybutadiene- and polyisoprene based **thermosetting** compns.  
as circuit board substrates)
- IT 106107-54-4  
RL: PEP (Physical, engineering or chemical process); POF (Polymer in  
formulation); PRP (Properties); TEM (Technical or engineered material  
use); PROC (Process); USES (Uses)  
(styrene-butadiene rubber, block, triblock, Vector 8508D;  
polybutadiene- and polyisoprene based **thermosetting** compns.  
as circuit board substrates)
- IT 7631-86-9, CE 44I, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(filler, CE 44I; polybutadiene- and polyisoprene based  
**thermosetting** compns. as circuit board substrates)
- RN 7631-86-9 HCAPLUS  
CN Silica (7CI, 8CI, 9CI) (CA INDEX NAME)

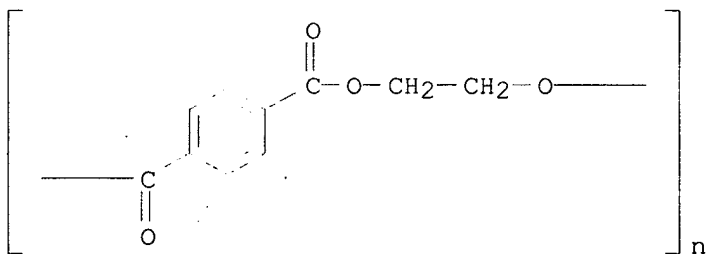
O=Si=O

AN 2001:805245 HCAPLUS  
 DN 135:345952  
 TI Peel-apart **metal** compound thin film layer **laminate**  
 used for transfer of **metal** compound layer onto other material or  
 forming foil or powder  
 IN Taniuchi, Takahiro; Inoue, Masahiro  
 PA Oike Industry Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 4 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM B32B009-00  
 ICS B44C001-17  
 CC 42-11 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 57, 75

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001310411	A2	20011106	JP 2000-131982	20000501
AB	The <b>laminate</b> comprises, successively from the bottom, a <b>substrate</b> film (S), a <b>metal</b> thin film <b>layer</b> (M), and a <b>metal</b> compd. thin film <b>layer</b> (C) of 5-300 .mu.m thickness; wherein adhesion between S and M is stronger than that between M and C. The laminate is free from an org. release layer. Thus, a <b>polyethylene terephthalate</b> film laminated with a Au layer and a Si oxide layer was applied on an acrylic polymer sheet via an urethane-acrylic adhesive and hot pressed to bond only the Si oxide layer, and the Au/ <b>PET</b> laminate was peeled off. The transferred Si oxide layer was free from org. components or pollutants.				
ST	<b>metal</b> compd. thin film <b>laminate</b> transfer; silicon oxide thin layer transfer; indium tin oxide thin layer transfer; oxide metal thin layer transfer material; nitride metal thin layer transfer material; oxynitride metal thin layer transfer material; foil <b>metal</b> compd. manuf transfer peelable <b>laminate</b> ; powder <b>metal</b> compd. manuf transfer peelable <b>laminate</b> ; peel apart <b>metal</b> compd <b>laminate</b> transfer				
IT	<b>Metals</b> , uses RL: TEM (Technical or engineered material use); USES (Uses) (in <b>laminate</b> ; peel-apart <b>metal</b> compd. thin film layer <b>laminate</b> used for transfer of <b>metal</b> compd. layer onto other material or forming foil or powder)				
IT	Foil Powders ( <b>metal</b> compd., manuf.; peel-apart <b>metal</b> compd. thin film layer <b>laminate</b> used for transfer of <b>metal</b> compd. layer onto other material or forming foil or powder)				
IT	<b>Laminated</b> plastic films Transfers (peel-apart <b>metal</b> compd. thin film layer <b>laminate</b> used for transfer of <b>metal</b> compd. layer onto other material or forming foil or powder)				
IT	<b>Polyesters</b> , uses RL: TEM (Technical or engineered material use); USES (Uses) ( <b>substrate</b> in <b>laminate</b> ; peel-apart <b>metal</b> compd. thin film layer <b>laminate</b> used for transfer of <b>metal</b> compd. layer onto other material or forming foil or powder)				
IT	Nitrides Oxides (inorganic), uses Oxynitrides				

- RL: TEM (Technical or engineered material use); USES (Uses)  
 (thin film; peel-apart **metal** compd. thin film layer  
**laminate** used for transfer of **metal** compd. layer onto  
 other material or forming foil or powder)
- IT 25038-59-9, Polyethylene terephthalate, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (substrate in **laminate**; peel-apart **metal**  
 compd. thin film **layer laminate** used for transfer  
 of **metal** compd. **layer** onto other material or  
 forming foil or powder)
- IT 7440-06-4, Platinum, uses 7440-22-4, Silver, uses 7440-57-5, Gold,  
 uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (thin film layer, in **laminate**; peel-apart **metal**  
 compd. thin film layer **laminate** used for transfer of  
**metal** compd. layer onto other material or forming foil or  
 powder)
- IT 1312-43-2, Indium oxide 1332-29-2, Tin oxide 1344-28-1, Aluminum  
 oxide, uses 7631-86-9, Silicon oxide, uses 11105-01-4, Silicon  
 oxynitride 12033-89-5, Silicon nitride, uses 12633-97-5, Aluminum  
 oxynitride 13463-67-7, **Titanium** oxide, uses 24304-00-5,  
 Aluminum nitride 25583-20-4, **Titanium** nitride 25617-98-5,  
 Indium nitride 37271-26-4, **Titanium** oxynitride 50926-11-9,  
 Indium tin oxide 55574-97-5, Tin nitride 116517-57-8, Indium  
 oxynitride 130988-77-1, Tin oxynitride  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (thin film; peel-apart **metal** compd. thin film layer  
**laminate** used for transfer of **metal** compd. layer onto  
 other material or forming foil or powder)
- IT 25038-59-9, Polyethylene terephthalate, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (substrate in **laminate**; peel-apart **metal**  
 compd. thin film **layer laminate** used for transfer  
 of **metal** compd. **layer** onto other material or  
 forming foil or powder)
- RN 25038-59-9 HCAPLUS  
 CN Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-phenylenecarbonyl) (9CI) (CA INDEX  
 NAME)



- IT 7631-86-9, Silicon oxide, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (thin film; peel-apart **metal** compd. thin film layer  
**laminate** used for transfer of **metal** compd. layer onto  
 other material or forming foil or powder)
- RN 7631-86-9 HCAPLUS  
 CN Silica (7CI, 8CI, 9CI) (CA INDEX NAME)

O=Si=O

L72 ANSWER 4 OF 20 HCAPLUS COPYRIGHT 2002 ACS

AN 2001:705075 HCAPLUS

DN 135:264333

TI Antireflective conductive transparent laminates and image display apparatus

IN Yamada, Tsukasa; Matsufuji, Akihiro

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G02B001-11

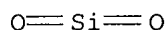
ICS B32B007-02; B32B027-00; G02B001-10; G02F001-1335; H01B005-14; H04N005-72

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

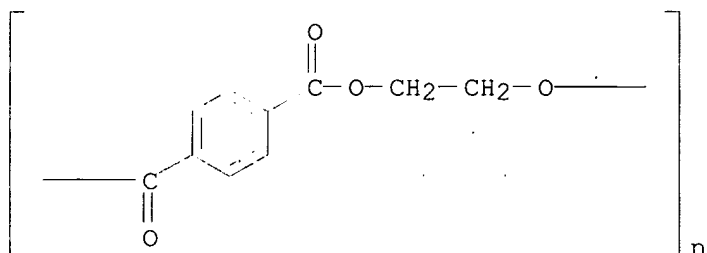
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001264505	A2	20010926	JP 2000-71199	20000314
AB	The <b>laminates</b> , suitable for use on image display screens, comprise: a transparent plastic film <b>substrate</b> ; a hard coating layer contg. Al <sub>2</sub> O <sub>3</sub> , <b>SiO<sub>2</sub></b> , TiO <sub>2</sub> and ZrO <sub>2</sub> ; a transparent conductive plastic <b>layer</b> contg. fine <b>metal</b> particles; an antireflective multilayer; and a transparent anticontamination layer.				
ST	antireflective conductive transparent laminate image display				
IT	Antireflective films Electromagnetic wave Laminated materials Optical dispersion Optical imaging devices Polymerization Refractive index (antireflective conductive transparent laminates and image display app.)				
IT	<b>Polyesters</b> , uses RL: DEV (Device component use); USES (Uses) (antireflective conductive transparent laminates and image display app.)				
IT	1314-23-4, Zirconium dioxide, uses 1344-28-1, Alumina, uses 7440-22-4, Silver, uses 7631-86-9, <b>Silica</b> , uses 13463-67-7, <b>Titanium</b> oxide (TiO <sub>2</sub> ), uses 25038-59-9, Polyethyleneterephthalate, uses 29570-58-9, DPHA RL: DEV (Device component use); USES (Uses) (antireflective conductive transparent laminates and image display app.)				
IT	<b>7631-86-9, Silica</b> , uses 25038-59-9, Polyethyleneterephthalate, uses RL: DEV (Device component use); USES (Uses) (antireflective conductive transparent laminates and image display app.)				
RN	7631-86-9 HCAPLUS				
CN	Silica (7CI, 8CI, 9CI) (CA INDEX NAME)				





RN 25038-59-9 HCAPLUS  
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI) (CA INDEX NAME)



L72 ANSWER 5 OF 20 HCAPLUS COPYRIGHT 2002 ACS

AN 2001:707518 HCAPLUS

DN 135:264344

TI Antireflective conductive transparent laminates and image display apparatus

IN Yamada, Tsukasa; Matsutou, Akihiro; Hatakeyama, Kenichiro

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G02B001-11

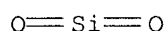
ICS B32B007-02; G02B001-10; G02F001-1335; H01B005-14; H01J029-89; H04N005-72

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

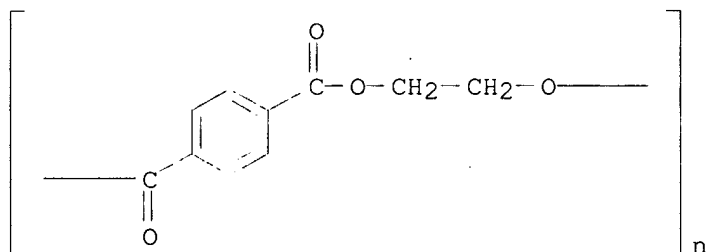
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001264503	A2	20010926	JP 2000-71190	20000314
AB	The <b>laminates</b> , suitable for use on image display screens, comprise: a transparent plastic film <b>substrate</b> ; a hard coating layer contg. Al <sub>2</sub> O <sub>3</sub> , SiO <sub>2</sub> , TiO <sub>2</sub> and ZrO <sub>2</sub> ; a transparent conductive plastic <b>layer</b> contg. <b>metal</b> particles; an antireflective multilayer; and a transparent plastic anticontamination layer.				
ST	antireflective conductive transparent laminate image display				
IT	Antireflective films Electromagnetic wave Laminated materials Optical dispersion Optical imaging devices Polymerization Refractive index (antireflective conductive transparent laminates and image display app.)				
IT	<b>Polyesters</b> , uses RL: DEV (Device component use); USES (Uses) (antireflective conductive transparent laminates and image display				

app.)  
 IT 1314-23-4, Zirconium dioxide, uses 1344-28-1, Alumina, uses 7440-22-4, Silver, uses 7631-86-9, Silica, uses 13463-67-7, Titanium oxide (TiO<sub>2</sub>), uses 25038-59-9, Polyethyleneterephthalate, uses 29570-58-9, DPHA  
 RL: DEV (Device component use); USES (Uses)  
 (antireflective conductive transparent laminates and image display app.)  
 IT 7631-86-9, Silica, uses 25038-59-9, Polyethyleneterephthalate, uses  
 RL: DEV (Device component use); USES (Uses)  
 (antireflective conductive transparent laminates and image display app.)  
 RN 7631-86-9 HCAPLUS  
 CN Silica (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 25038-59-9 HCAPLUS  
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI) (CA INDEX NAME)



L72 ANSWER 6 OF 20 HCAPLUS COPYRIGHT 2002 ACS  
 AN 2001:446167 HCAPLUS  
 DN 135:47287  
 TI Antifogging laminated films with good prevention of water drops from staying on surface  
 IN Miyauchi, Tatsuo  
 PA Spatta K. K., Japan  
 SO Jpn. Kokai Tokkyo Koho, 3 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM B32B009-00  
 ICS B32B015-08; C23C014-08; C23C016-06  
 CC 38-3 (Plastics Fabrication and Uses)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001162715	A2	20010619	JP 1999-376399	19991209
AB	The films comprise a <b>substrate layer</b> , a <b>metal layer</b> , and a surface <b>metal layer</b> contg. photocatalysts. Thus, a film having a layer of sputtered <b>SiO<sub>2</sub></b> and a top layer of sputtered alloys contg. Ag and TiO <sub>2</sub> was manufd.				
ST	antifogging laminate film silver <b>titania</b> photocatalyst;				

silica sputtering laminate film  
 IT Antifogging agents  
     **Laminated** plastic films  
     Photolysis catalysts  
     Sputtering  
         (antifogging **laminated** films having photocatalyst-contg.  
         sputtered **metal** alloy layers)  
 IT Polyamides, uses  
     **Polyesters**, uses  
     RL: TEM (Technical or engineered material use); USES (Uses)  
         (antifogging **laminated** films having photocatalyst-contg.  
         sputtered **metal** alloy layers)  
 IT Mirrors  
     (automotive; antifogging **laminated** films having  
     photocatalyst-contg. sputtered **metal** alloy layers)  
 IT 7631-86-9, Silica, uses 215712-93-9  
     RL: TEM (Technical or engineered material use); USES (Uses)  
         (antifogging **laminated** films having photocatalyst-contg.  
         sputtered **metal** alloy layers)  
 IT 7631-86-9, Silica, uses  
     RL: TEM (Technical or engineered material use); USES (Uses)  
         (antifogging **laminated** films having photocatalyst-contg.  
         sputtered **metal** alloy layers)  
 RN 7631-86-9 HCAPLUS  
 CN Silica (7CI, 8CI, 9CI) (CA INDEX NAME)

O=Si=O

L72 ANSWER 7 OF 20 HCAPLUS COPYRIGHT 2002 ACS

AN 2001:900309 HCAPLUS

DN 136:30435

TI **Laminate of metal layer and  
 insulating substrate** comprised of **fibrous  
 filler and thermoplastic and thermosetting  
 resins**

IN Ikegawa, Naoto; Kondo, Naoyuki; Nakata, Kimiaki

PA Matsushita Electric Works, Ltd., Japan

SO Eur. Pat. Appl., 20 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM H05K001-03

ICS C23C014-20

CC 76-3 (Electric Phenomena)

Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1162866	A2	20011212	EP 2001-250200	20010605
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2002060522	A2	20020226	JP 2001-171104	20010606
PRAI	JP 2000-168461	A	20000606		
AB	The invention relates to a <b>laminate</b> comprising a <b>metal  layer</b> which is formed on an covers the surface of an <b>insulating substrate</b> activated by the plasma treatment by any method selected from a sputtering method, a vacuum depositing				

method and an ion plating method. The substrate is obtained by molding a resin compn. contg. 20-150 parts by mass of a **fibrous filler** having an av. **fiber** diam. of 0.1-5 .mu.m and an av. fiber length of 10-50 .mu.m relative to 100 parts by mass of a base resin comprising a **thermoplastic** resin and a **thermosetting** resin.

ST laminate metal layer substrate  
fibrous filler thermoplastic  
thermosetting resin

IT Vapor deposition process  
(ion plating, metal covering; laminate of  
metal layer and insulating  
substrate comprised of fibrous filler and  
thermoplastic and thermosetting resins)

IT Fillers  
Laminated materials  
Molding  
(laminate of metal layer and  
insulating substrate comprised of fibrous  
filler and thermoplastic and thermosetting  
resins)

IT Fibers  
Glass fibers, processes  
Kaolin, processes  
RL: DEV (Device component use); MOA (Modifier or additive use); PEP  
(Physical, engineering or chemical process); PROC (Process); USES (Uses)  
(laminate of metal layer and  
insulating substrate comprised of fibrous  
filler and thermoplastic and thermosetting  
resins)

IT Nitrile rubber, processes  
Polyamides, processes  
Polysulfones, processes  
Polythiophenylenes  
RL: DEV (Device component use); PEP (Physical, engineering or chemical  
process); PROC (Process); USES (Uses)  
(laminate of metal layer and  
insulating substrate comprised of fibrous  
filler and thermoplastic and thermosetting  
resins)

IT Sputtering  
(metal covering; laminate of metal  
layer and insulating substrate comprised of  
fibrous filler and thermoplastic and  
thermosetting resins)

IT Liquid crystals, polymeric  
(polyesters; laminate of metal  
layer and insulating substrate comprised of  
fibrous filler and thermoplastic and  
thermosetting resins)

IT Polyimides, processes  
RL: DEV (Device component use); PEP (Physical, engineering or chemical  
process); PROC (Process); USES (Uses)  
(polyether-; laminate of metal layer and  
insulating substrate comprised of fibrous  
filler and thermoplastic and thermosetting  
resins)

IT Polyethers, processes  
RL: DEV (Device component use); PEP (Physical, engineering or chemical  
process); PROC (Process); USES (Uses)

- (polyimide-; laminate of metal layer and insulating substrate comprised of fibrous filler and thermoplastic and thermosetting resins)
- IT Plastics, processes  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
 (thermoplastics; laminate of metal layer and insulating substrate comprised of fibrous filler and thermoplastic and thermosetting resins)
- IT Plastics, processes  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
 (thermosetting; laminate of metal layer and insulating substrate comprised of fibrous filler and thermoplastic and thermosetting resins)
- IT 11121-16-7, Aluminum borate 12047-27-7  
 , Barium titanate, processes 12049-50-2, Calcium titanate 12673-69-7, Potassium titanate  
 RL: DEV (Device component use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
 (laminate of metal layer and insulating substrate comprised of fibrous filler and thermoplastic and thermosetting resins)
- IT 13983-17-0, Wollastonite (Ca(SiO<sub>3</sub>)) 24968-12-5  
 , Polybutylene terephthalate 25038-54-4, Nylon 6, processes 25667-42-9, Poly(oxy-1,4-phenylenesulfonyl-1,4-phenylene) 31694-16-3 32131-17-2, Nylon 66, processes  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
 (laminate of metal layer and insulating substrate comprised of fibrous filler and thermoplastic and thermosetting resins)
- IT 7440-50-8, Copper, processes  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
 (metal layer; laminate of metal layer and insulating substrate comprised of fibrous filler and thermoplastic and thermosetting resins)
- IT 9003-18-3  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
 (nitrile rubber, laminate of metal layer and insulating substrate comprised of fibrous filler and thermoplastic and thermosetting resins)
- IT 88-96-0, 1,2-Benzenedicarboxamide  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
 (polymer of; laminate of metal layer and insulating substrate comprised of fibrous filler and thermoplastic and thermosetting resins)
- IT 7631-86-9, Silica, processes  
 RL: DEV (Device component use); MOA (Modifier or additive use); PEP

(Physical, engineering or chemical process); PROC (Process); USES (Uses)  
 (spherical filler; **laminate of metal layer**  
 and **insulating substrate** comprised of  
**fibrous filler** and **thermoplastic** and  
**thermosetting resins**)

IT 11121-16-7, **Aluminum borate** 12047-27-7  
 , Barium titanate, processes 12049-50-2, Calcium  
**titanate**

RL: DEV (Device component use); MOA (Modifier or additive use); PEP  
 (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
 (**laminate of metal layer** and  
**insulating substrate** comprised of **fibrous**  
**filler** and **thermoplastic** and **thermosetting**  
**resins**)

RN 11121-16-7 HCAPLUS

CN Boric acid, aluminum salt (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 12047-27-7 HCAPLUS

CN Barium titanium oxide (BaTiO<sub>3</sub>) (8CI, 9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 12049-50-2 HCAPLUS

CN Calcium titanium oxide (CaTiO<sub>3</sub>) (8CI, 9CI) (CA INDEX NAME)

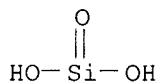
Component	Ratio	Component Registry Number
=====	=====	=====
O	3	17778-80-2
Ca	1	7440-70-2
Ti	1	7440-32-6

IT 13983-17-0, **Wollastonite** (Ca(SiO<sub>3</sub>)) 24968-12-5  
 , Polybutylene terephthalate 25038-54-4, Nylon 6, processes  
 25667-42-9, Poly(oxy-1,4-phenylenesulfonyl-1,4-phenylene)  
 31694-16-3 32131-17-2, Nylon 66, processes

RL: DEV (Device component use); PEP (Physical, engineering or chemical  
 process); PROC (Process); USES (Uses)  
 (**laminate of metal layer** and  
**insulating substrate** comprised of **fibrous**  
**filler** and **thermoplastic** and **thermosetting**  
**resins**)

RN 13983-17-0 HCAPLUS

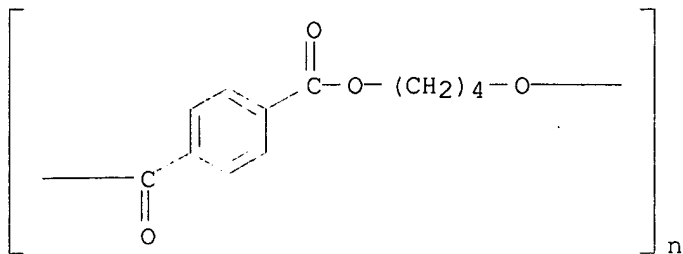
CN Wollastonite (Ca(SiO<sub>3</sub>)) (9CI) (CA INDEX NAME)



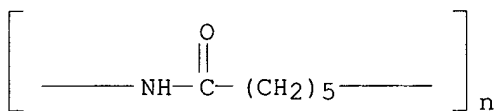
Ca

RN 24968-12-5 HCAPLUS

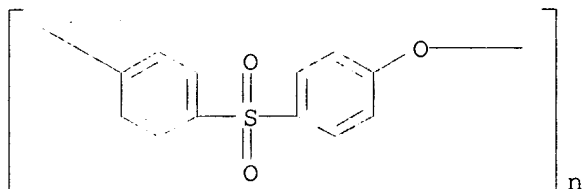
CN Poly(oxy-1,4-butanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI) (CA INDEX NAME)



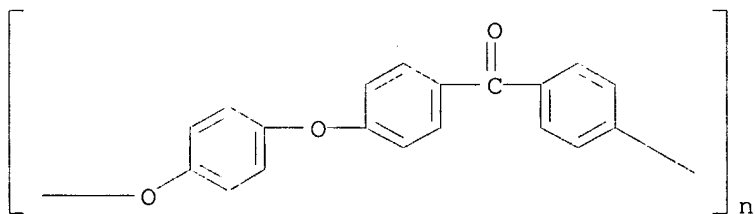
RN 25038-54-4 HCAPLUS  
CN Poly[imino(1-oxo-1,6-hexanediyl)] (9CI) (CA INDEX NAME)



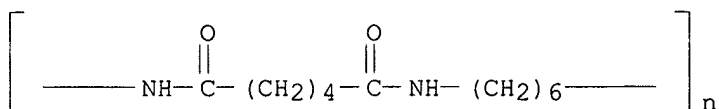
RN 25667-42-9 HCAPLUS  
CN Poly(oxy-1,4-phenylenesulfonyl-1,4-phenylene) (9CI) (CA INDEX NAME)



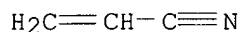
RN 31694-16-3 HCAPLUS  
CN Poly(oxy-1,4-phenyleneoxy-1,4-phenylenecarbonyl-1,4-phenylene) (9CI) (CA INDEX NAME)



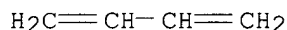
RN 32131-17-2 HCAPLUS  
CN Poly[imino(1,6-dioxo-1,6-hexanediyl)imino-1,6-hexanediyl] (9CI) (CA INDEX NAME)



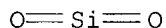
IT 9003-18-3  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
 (nitrile rubber, **laminated** of **metal layer** and **insulating substrate** comprised of **fibrous filler** and **thermoplastic** and **thermosetting** resins)  
 RN 9003-18-3 HCAPLUS  
 CN 2-Propenenitrile, polymer with 1,3-butadiene (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 107-13-1  
 CMF C3 H3 N



CM 2  
 CRN 106-99-0  
 CMF C4 H6



IT 7631-86-9, Silica, processes  
 RL: DEV (Device component use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
 (spherical filler; **laminated** of **metal layer** and **insulating substrate** comprised of **fibrous filler** and **thermoplastic** and **thermosetting** resins)  
 RN 7631-86-9 HCAPLUS  
 CN Silica (7CI, 8CI, 9CI) (CA INDEX NAME)



L72 ANSWER 8 OF 20 WPIX COPYRIGHT 2002 DERWENT INFORMATION LTD  
 AN 2001-451730 [48] WPIX  
 DNN N2001-334409 DNC C2001-136437  
 TI Redirecting chemical vapor deposition of material to produce coatings on substrate, involves selectively changing localized environment of energy source to redirect gases by applying source of pressure differential.  
 DC A17 A23 A85 L03 P42 P73 V02 V06 X11 X12  
 IN DALZELL, W J; DESHPANDE, G; HENDRICK, M; HUNT, A T; HWANG, J T; LAYE, N S; OLJACA, M; PODA, A; SHANMUGHAM, S; SHOUP, S S; TOMOV, T  
 PA (MICR-N) MICROCOATING TECHNOLOGIES INC  
 CYC 94  
 PI WO 2001047704 A1 20010705 (200148)\* EN 46p B32B005-16  
 RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ  
 NL OA PT SD SE SL SZ TR TZ UG ZW  
 W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM  
 DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC



LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE  
 SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW  
 AU 2001027402 A 20010709 (200164) B32B005-16  
 ADT WO 2001047704 A1 WO 2000-US35416 20001221; AU 2001027402 A AU 2001-27402  
 20001221  
 FDT AU 2001027402 A Based on WO 200147704  
 PRAI US 2000-234575P 20000922; US 1999-474491 19991229  
 IC ICM B32B005-16  
 ICS B05B007-00; B05B007-16; B05D001-08; B05D001-36; B32B005-00;  
 B32B009-00; B32B009-04; B32B013-12; B32B015-08; B32B027-00;  
 B32B027-08; B32B027-36; C23C004-04; C23C004-08; C23C004-10  
 AB WO 200147704 A UPAB: 20010829

NOVELTY - Energy source activates precursor introduced into localized environment, within gases which are directed along path (I). At least one source of pressure differential is applied to localized environment of energy source, such that localized environment is selectively changed to redirect gases from path (I) to redirected path (II). Gases are contacted to substrate surface to form at least part of material.

DETAILED DESCRIPTION - Precursor is introduced into localized environment of at least one energy source. Energy source activates precursor within gases which are directed along path (I). At least one source of pressure differential is applied to localized environment of energy source, such that localized environment is selectively changed to redirect gases from path (I) to redirected path (II). Thereby, gases are made to contact surface and form at least part of material.

INDEPENDENT CLAIMS are also included for the following:

(i) Apparatus for chemical vapor deposition of material, comprises a nozzle for directing a precursor material along a path (I), an ignition mechanism for igniting the precursor material and for vaporizing at least a portion of the precursor material, and a redirecting jet for creating a pressure differential along the path (I) to redirect the partially vaporized material from path (I) to redirected path (II). The partially vaporized material is made to contact a surface to form the material;

(ii) **Insulator** for an electrical conductor or superconductor which consists of thin film coating of at least one electrically **insulating** oxide;

(iii) **Insulated** electrical conductor or superconductor which comprises electrical **insulator**; and

(iv) A **laminate** which comprises a polymer-containing material coated with a combustion, chemical vapor-deposited or redirected chemical deposited barrier layer. Barrier **layer** is coating of **metal**, an oxide or a mixture of **metal** and oxide, that inhibits gas and vapor transmission and/or provides a scratch resistant surface.

USE - For chemical vapor deposition to form powders and coatings on substrate, and for production of barrier or electrochemical coatings on polymers, as well as protective or **insulating** coating for metal foil and electromechanical windings. The chemical vapor deposition method is used for forming thin film **insulating** oxide coatings on the surface of conductive or super conductive wires. The redirecting methods are also useful for producing powders that can be collected for further processing and for forming metal oxide barrier coatings for polymeric food and beverage containers.

ADVANTAGE - A uniform coating is obtained by chemical vapor deposition method by redirecting the energy source and/or hot gases, thereby produced. The energy source and/or active deposition gases are activated, redirected and redistributed to control the material properties, decrease the gas temperature or increase the substrate area coated by the deposition material. By directing the deposition gases, vapor clusters and particles in a direction different from heat produced

by energy source, it is possible to control the substrate temperature to allow deposition without damaging the substrate. A more effective distribution of deposition species in the gases is enabled. At the same time, precursor are allowed to attain the appropriate temperatures for forming the coating composition, while avoiding over heating and damaging the substrate. The amount of heat transferred to the substrate is reduced. The redirected gases are more thoroughly mixed and therefore provide a more homogeneous coating and heat distribution on substrate. The efficiency of the electromagnetic device is increased since the thickness of **insulators** on the windings of the device is reduced and **insulation** between adjacent windings and other components is increased. Thin film layers with excellent adhesion are obtained.

Dwg.0/11

FS CPI EPI GMPI

FA AB

MC CPI: A99-A; L03-A01B3; L03-A01C

EPI: V02-H01B; V06-M11B; X11-J08B; X12-C01D2; X12-D06A; X12-D06A1;  
X12-D07B9; X12-E02B

L72 ANSWER 9 OF 20 WPIX COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 2001-488488 [53] WPIX

DNN N2001-361478 DNC C2001-146549

TI Electrochemical capacitor, for military and commercial applications, comprises polymer electrolyte including solid base polymer material in form of thin polymer, such as **polyester**, polypropylene.

DC A85 L03 M11 V01 X16

IN MUNSHI, M Z A

PA (LITH-N) LITHIUM POWER TECHNOLOGIES INC

CYC 93

PI WO 2001039305 A1 WO 20010531 (200153)\* EN 45p H01M006-18

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ  
NL OA PT SD SE SL SZ TR TZ UG ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM  
DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC  
LK LR LS LT LU LV MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG  
SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

AU 2001022512 A 20010604 (200153) H01M006-18

ADT WO 2001039305 A1 WO 2000-US32275 20001122; AU 2001022512 A AU 2001-22512  
20001122

FDT AU 2001022512 A Based on WO 200139305

PRAI US 1999-449443 19991125

IC ICM H01M006-18

AB WO 200139305 A UPAB: 20010919

NOVELTY - The electrochemical capacitor comprises a polymer electrolyte including solid base polymer material in the form of thin polymer, such as **polyester** (PET), polypropylene (PP), polyethylene naphthalate (PEN), polycarbonate (PC), **polyphenylene sulfide** (PPS), polyvinylidene-fluoride (PVDF), polytetrafluoroethylene (PTFE) or their mixtures.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for;

(1) Manufacture of polymer electrolyte for electrochemical capacitor, which involves dissolving PVDF and acrylate monomer or oligomer in a hydrocarbon solvent to form polymer solution, casting the polymer solution into thin film by evaporating hydrocarbon solvent, soaking the thin film in a predetermined liquid electrolyte solution containing salt, and curing acrylate monomer or oligomer;

(2) Manufacture of dimensionally stable, highly resilient polymer solid-solution blend film for electrochemical capacitor which involves mixing PVDF and AMPS homogeneously to form a copolymer blend. A very high surface area inorganic filler having average particle size diameter of

less than 0.05 micro m, surface area of 100 m<sup>2</sup>/g and concentration of 0.1-30 weight% is dispersed in the copolymer blend. The obtained mixture is cast into a thin film. Subsequently, the thin film is soaked in a liquid solvent electrolyte for absorption and retention of electrolyte in the thin film. The porosity and mechanical stability of the thin film are enhanced by the presence of inorganic filler;

(3) Thin film electrochemical capacitor comprising (a) resilient flexible polymeric electrolyte thin film including base polymer dispersed with inorganic filler to increase its surface area and porosity, (b) liquid electrolyte comprising liquid polymer, (c) organic solvent electrolyte and salt solution impregnated in thin film, and (d) a pair of spaced-apart flexible thin film electrodes. Each electrodes are adhered to a current connector, and the thin film is tightly sandwiched between the electrodes;

(4) An electrochemical capacitor electrode comprising ultra thin film metal substrate (which is etched to increase its intrinsic surface area) for cathode or anode substrate of electrochemical capacitor. The ultra thin film metal substrate has thickness of 1-10 micro m and comprises metallic material selected from aluminum, copper, nickel, **titanium**, stainless steel and alloy including inconel;

(5) Method for coating ultra thin film metallized polymer substrate for thin film electrochemical capacitor with thin film active anode and cathode materials. Anode and cathode materials are prepared to a size suitable for application to thin film metallized polymer substrate. The prepared materials are then applied directly to either sides of thin film metallized polymer substrate to form thin film of anode and cathode materials of desired thickness;

(6) Fabrication of thin film electrochemical capacitor which involves forming thin film electrode by double **metallizing** polymer substrate for applying activated electrode material, and **laminating** separate anode and cathode elements respectively on either sides of double-**metallized** polymer substrate to provide a highly flexible electrode for capacitor;

(7) Bipolar electrode for capacitor, comprising flexible polymer **substrate** of 0.5-50 micro m thickness, two **metallization layers** of 1 micro m thickness formed on each side of **substrate**, and an ultra-thin anode **layer** formed over **metallization layer**. The ratio of **substrate** thickness to anode or cathode layer thickness is less than 0.5, and surface resistivity for each anode and cathode layer is less than 0.1 ohm/square;

(8) Formation of thin bipolar capacitor which involves **laminating** together layer(s) of bipolar unit between a layer of anode and cathode to provide a stack having laminar ends. The anode and cathode comprises a **metallized** polymer current collectors. The anode and cathode are oriented and current collectors are applied to laminar ends. The bipolar unit comprises a flexible polymer **substrate** of 0.5-50 micro m thickness optionally dispersed with electrically conductive material, two **metallization layers** of 1 micro m thickness formed on either sides of polymer **substrate**, ultra-thin anode and cathode **layers** sequentially formed over **metallization layer** and **layer** of solid polymer electrolyte formed over anode or cathode layer.

USE - For military and commercial applications.

ADVANTAGE - Electrochemical capacitors with ultra-thin current collectors having improved energy density, power density, higher capacity utilization, higher cycle life, greater charge-discharge efficiencies, lower ESR, greater safety and greater reliability, is produced economically at high speed. The capacitor has a base polymer material that

is dimensionally stable in aqueous or non-aqueous solvents and temperature, and exhibits little or no swelling characteristics when contact with liquid solvents.

Dwg.0/4

FS CPI EPI

FA AB

MC CPI: A12-E07B; L03-B03A; M11-B05

EPI: V01-B01A; V01-B01B1; V01-B01D; V01-B01G; X16-E01C; X16-J01A; X16-L02

L72 ANSWER 10 OF 20 HCAPLUS COPYRIGHT 2002 ACS

AN 2000:344299 HCAPLUS

DN 132:335635

TI **Laminated** microporous **polyester** films with excellent thermal **insulating** properties and **metal** cans **laminated** therewith

IN Hibiya, Takashi; Miki, Takatoshi

PA Mitsubishi Chemical Polyester Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM B32B027-36

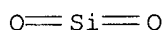
ICS B32B005-18; B32B007-02; B32B015-08; B65D001-12; C08J005-18;  
C08J009-00; B29C055-12; B29K067-00; B29K105-04; B29K105-06;  
B29L009-00; C08L067-02

CC 38-3 (Plastics Fabrication and Uses)

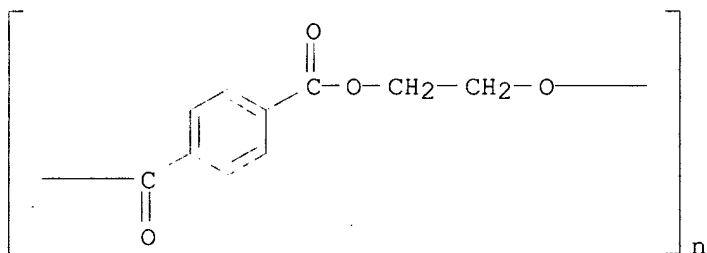
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000141569	A2	20000523	JP 1998-320292	19981111
AB	The films with heat shrinkage .gtoreq.2.0% at 110.degree. have (A) microporous <b>polyester</b> layers with d. 0.50-1.00 g/cm3 and (B) <b>polyester</b> layers with d. .gtoreq.1.10 g/cm3 on at least one side of A. Thus, a biaxially oriented 3-layer film comprising a 13% cryst. polypropylene-contg. <b>PET</b> middle layer and 0.12% <b>SiO2</b> -contg. <b>PET</b> surface layers showed 60.degree. gloss 99%, 20.degree. gloss 44%, and smooth surface after <b>lamination</b> on a <b>metal</b> can.				
ST	<b>polyester</b> multilayer film <b>metal</b> can <b>laminate</b> ; thermal <b>insulator</b> microporous <b>PET</b> polypropylene blend; heat shrinkage <b>PET</b> <b>silica</b> film lamination				
IT	Cans Heat-shrinkable films <b>Laminated</b> plastic films Thermal <b>insulators</b> ( <b>laminated</b> microporous <b>polyester</b> films for <b>metal</b> cans with good thermal <b>insulating</b> properties)				
IT	<b>Polyesters</b> , uses RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses) ( <b>laminated</b> microporous <b>polyester</b> films for <b>metal</b> cans with good thermal <b>insulating</b> properties)				
IT	7631-86-9, <b>Silica</b> , uses 9003-07-0, Polypropylene 13463-67-7, <b>Titanium</b> oxide, uses RL: MOA (Modifier or additive use); USES (Uses) ( <b>laminated</b> microporous <b>polyester</b> films for <b>metal</b> cans with good thermal <b>insulating</b> properties)				
IT	25038-59-9, Poly(ethylene terephthalate), uses RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)				

(laminated microporous polyester films for metal cans with good thermal insulating properties)  
 IT 7631-86-9, Silica, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (laminated microporous polyester films for metal cans with good thermal insulating properties)  
 RN 7631-86-9 HCAPLUS  
 CN Silica (7CI, 8CI, 9CI) (CA INDEX NAME)



IT 25038-59-9, Poly(ethylene terephthalate), uses  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (laminated microporous polyester films for metal cans with good thermal insulating properties)  
 RN 25038-59-9 HCAPLUS  
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI) (CA INDEX NAME)



L72 ANSWER 11 OF 20 HCAPLUS COPYRIGHT 2002 ACS  
 AN 2000:105106 HCAPLUS  
 DN 132:138533  
 TI Gas-barrier transparent laminates with good adhesion, packaging materials, and their packaged products  
 IN Sasaki, Noboru; Sekiguchi, Mamoru; Hayashi, Kenji; Komori, Tsunenori; Matsuo, Ryukichi  
 PA Toppan Printing Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 10 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM B32B009-00  
 ICS B32B007-02; B32B027-40; B65D065-40  
 CC 38-3 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 17, 63, 67  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000043182	A2	20000215	JP 1998-218226	19980731
AB	The laminates, useful for packaging materials and bags for foods, pharmaceuticals, etc., consist of transparent plastic substrates, transparent primer layers comprising composites from organosilanes R'Si(OR) <sub>3</sub> (R' = alkyl, vinyl, glycidoxypopyl, etc.; R = CnH2n+1 alkyl; n .gtoreq.1) or their hydrolyzates, acrylic polyols, and				

isocyanates on .gtoreq.1 side of the **substrates**, 5-300 nm-thick vapor-deposited thin film layers of inorg. oxides, and gas-barrier composite films contg. water-sol. polymers, inorg. **layered** compds., and **metal** alkoxides  $M(OR)_n$  ( $M = \text{metal}$ ;  $R = C_nH_{2n+1}$  alkyl;  $n \geq 1$ ), where the interlayer spacing of the layered compds. in the composite films is .gtoreq.1.2 times that of the compds. before film formation. Thus, a transparent laminate of a **PET** substrate, a primer layer contg. composites prep'd. from  $Si(OEt)_4$ , epoxycyclohexylethyltrimethoxysilane, an acrylic polyol, and TDI in the presence of  $SnCl_2$ , a .apprx.20 nm-thick vapor-deposited  $Al_2O_3$  layer, and a gas-barrier layer (interlayer spacing enlargement ratio 2.17) contg. a 35:3:62 mixt. of montmorillonite, poly(vinyl alc.), and  $Si(OEt)_4$  showed O permeability 0.2 mL/m<sup>2</sup>-day and high lamination strength after retort sterilization at 125.degree. for 30 min.

ST transparent laminated film packaging acrylic siloxane; oxide layered compd gas barrier packaging; polyvinyl alc montmorillonite silane packaging film

IT Polyurethanes, uses

RL: FFD (Food or feed use); PRP (Properties); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)

(acrylic-polysiloxane-; delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)

IT Polysiloxanes, uses

RL: FFD (Food or feed use); PRP (Properties); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)

(acrylic-polyurethane-; delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)

IT Silanes

RL: FFD (Food or feed use); PRP (Properties); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)

(alkoxy; delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)

IT **Metal** alkoxides

RL: FFD (Food or feed use); PRP (Properties); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)

(composites with montmorillonite; delamination- and retort-resistant transparent **laminated** packaging films having polymer-montmorillonite composite gas-barrier layers)

IT Bags

Food packaging materials

Laminated plastic films

Polymerization catalysts

(delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)

IT Intercalation compounds

Oxides (inorganic), uses

RL: FFD (Food or feed use); PRP (Properties); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)

(delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)

IT Packaging materials

(films, gas-impermeable, transparent; delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)

IT Packaging materials

(films, heat-sealable, multilayer; delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)

- IT Smectite group minerals  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(intercalation complexes; delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)
- IT Acrylic polymers, uses  
RL: FFD (Food or feed use); PRP (Properties); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)  
(polyurethane-siloxane-; delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)
- IT Packaging materials  
(retort pouches; delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)
- IT **Polyesters**, uses  
RL: FFD (Food or feed use); PRP (Properties); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)  
(substrate; delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)
- IT Polymers, uses  
RL: FFD (Food or feed use); PRP (Properties); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)  
(water-sol., composites with montmorillonite; delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)
- IT 7440-31-5D, Tin, alkoxides 7772-99-8, Tin chloride, uses 57572-63-1, Tin oxychloride  
RL: CAT (Catalyst use); USES (Uses)  
(catalyst in primer layers; delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)
- IT 78-10-4DP, Tetraethoxysilane, polymers with epoxycyclohexylethyltrimethoxy silane, acrylic polyol, and TDI 1318-93-0DP, Montmorillonite, intercalation complexes with poly(vinyl alc.) and Et silicate 3388-04-3DP, Epoxycyclohexylethyltrimethoxysilane, polymers with acrylic polyol and TDI 9002-89-5DP, Poly(vinyl alcohol), intercalation complexes with montmorillonite and Et silicate 11099-06-2DP, Tetraethoxysilane homopolymer, intercalation complexes with montmorillonite and poly(vinyl alc.) 26471-62-5DP, TDI, polymers with alkoxysilanes and acrylic polyol  
RL: FFD (Food or feed use); IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)
- IT 1344-28-1, Aluminum oxide, uses 7631-86-9, Silicon oxide, uses  
RL: FFD (Food or feed use); PRP (Properties); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)  
(delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)
- IT 555-31-7D, Triisopropoxyaluminum, intercalation complexes 1309-48-4, Magnesia, uses 7429-90-5D, Aluminum, alkoxides, intercalation complexes 7440-21-3D, Silicon, alkoxides, intercalation complexes 7440-32-6D, **Titanium**, alkoxides, intercalation complexes 7440-67-7D, Zirconium, alkoxides, intercalation complexes  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(delamination- and retort-resistant transparent laminated packaging

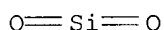
films having polymer-montmorillonite composite gas-barrier layers)

IT 25038-59-9, PET (polyester), uses  
 RL: FFD (Food or feed use); PRP (Properties); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)  
 (substrate; delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)

IT 7631-86-9, Silicon oxide, uses  
 RL: FFD (Food or feed use); PRP (Properties); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)  
 (delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)

RN 7631-86-9 HCAPLUS

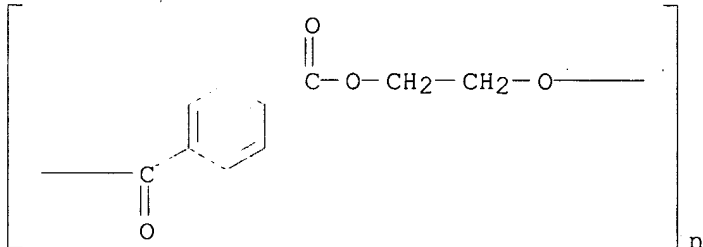
CN Silica (7CI, 8CI, 9CI) (CA INDEX NAME)



IT 25038-59-9, PET (polyester), uses  
 RL: FFD (Food or feed use); PRP (Properties); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)  
 (substrate; delamination- and retort-resistant transparent laminated packaging films having polymer-montmorillonite composite gas-barrier layers)

RN 25038-59-9 HCAPLUS

CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI) (CA INDEX NAME)



L72 ANSWER 12 OF 20 HCAPLUS COPYRIGHT 2002 ACS

AN 2000:23462 HCAPLUS

DN 132:65192

TI Transparent laminated film with good strength, dimensional stability, and electromagnetic shielding effect

IN Nishiyama, Kiminori

PA Teijin Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM B32B007-02  
 ICS B32B009-00; B32B015-04

CC 38-3 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 74

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI JP 2000006291 A2 20000111 JP 1998-175738 19980623

AB The film esp. useful for CRT and LCD comprises a transparent thermoplastic film and a **laminated** layer consisting of **metal** and dielec. substance, where the thermoplastic film has glass temp. .gtoreq.100.degree., the film, on the **laminated** side, has middle line av. surface roughness (Ra) .ltoreq.50 nm, 10 point av. roughness (Rz) .ltoreq.500 nm, and the resulting **laminated** film has visible light transmittance (Tvis) .gtoreq.60% and selective transmittance (Tvis/(Tvis + Tnir) x 100) .gtoreq.80%, Tnir = near IR transmittance. Vacuum sputtering sequentially a 30-nm In2O3, a 15-nm Ag layer, and a 30-nm In2O3 on a 50-.mu.m biaxially oriented poly(ethylene 2,6-naphthalate) film with Ra 7 nm and Rz 120 nm and bonding to a glass plate via an adhesive gave a laminated film with breaking strength 55 kg/mm2, surface resistivity 6.8 .OMEGA./box., and good visible light transmittance and selective transmittance.

ST laminated film strength dimensional stability electromagnetic shield; CRT LCD laminated film electromagnetic shield

IT Electric **insulators**  
Electromagnetic shields  
Laminated plastic films  
(transparent laminated film with good strength, dimensional stability, and electromagnetic shielding effect)

IT **Polyesters**, uses  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(transparent laminated film with good strength, dimensional stability, and electromagnetic shielding effect)

IT 1312-43-2, Indium trioxide 1314-13-2, Zinc oxide, uses 1314-23-4, Zirconium dioxide, uses 1314-61-0, Tantalum pentoxide 7440-22-4, Silver, uses 7440-50-8, Copper, uses 7440-57-5, Gold, uses 7631-86-9, **Silicon dioxide**, uses 13463-67-7, **Titanium** dioxide, uses 18282-10-5, Tin dioxide 24968-11-4, Poly(ethylene 2,6-naphthalate) 25230-87-9, Poly(ethylene 2,6-naphthalate) 113443-18-8, Silicon monooxide  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(transparent laminated film with good strength, dimensional stability, and electromagnetic shielding effect)

IT **7631-86-9, Silicon dioxide**, uses  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(transparent laminated film with good strength, dimensional stability, and electromagnetic shielding effect)

RN 7631-86-9 HCAPLUS

CN Silica (7CI, 8CI, 9CI) (CA INDEX NAME)

O=Si=O

L72 ANSWER 13 OF 20 HCAPLUS COPYRIGHT 2002 ACS

AN 1999:757007 HCAPLUS

DN 132:8303

TI Transparent multilayer electromagnetic wave reflection preventive components and reflection prevention thereof

IN Nagano, Toshiaki; Maki, Tetsu

PA Kansai Paint Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.  
CODEN: JKXXAF

DT Patent  
 LA Japanese  
 IC ICM H05K009-00  
 ICS B32B009-00  
 CC 76-14 (Electric Phenomena)  
 Section cross-reference(s): 38, 57, 77

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11330775	A2	19991130	JP 1998-134766	19980518
AB	The reflection preventive components have an electromagnetic wave reflection preventive <b>metal</b> layer which is <b>laminated</b> by ITO transparent multilayer units, each of which is further a multilayer comprising successively <b>laminated</b> by a patterned ITO layer, an optional transparent support layer, a transparent polymer layer, and an optional another transparent support layer. The transparent polymer layer may contains powd. <b>silica</b> (size .ltoreq.100 .mu.m) as a dielec. material. The multilayer components are easily manufd. and light-weighted.				
ST	ITO transparent pattern conductor electromagnetic wave shield reflection prevention				
IT	Phenolic resins, properties RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (aminoplast-, acrylic polymer mixt.; laminate type radio wave acid resisting body and radio wave acid resisting method of possessing transparency)				
IT	Electrooptical reflection Magnetooptical reflection (electromagnetooptical, multilayer, transparent; laminate type radio wave acid resisting body and radio wave acid resisting method of possessing transparency)				
IT	Electromagnetic shields (laminate type radio wave acid resisting body and radio wave acid resisting method of possessing transparency)				
IT	Acrylic polymers, properties RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (melamine polymer mixt.; laminate type radio wave acid resisting body and radio wave acid resisting method of possessing transparency)				
IT	Aminoplasts RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (phenolic, acrylic polymer mixt.; laminate type radio wave acid resisting body and radio wave acid resisting method of possessing transparency)				
IT	Electrooptical reflection (prevention of; laminate type radio wave acid resisting body and radio wave acid resisting method of possessing transparency)				
IT	Electric <b>insulators</b> ( <b>silica</b> powder; laminate type radio wave acid resisting body and radio wave acid resisting method of possessing transparency)				
IT	<b>Polyesters</b> , properties RL: DEV (Device component use); NUU (Other use, unclassified); PRP (Properties); USES (Uses) (support plate, transparent; laminate type radio wave acid resisting body and radio wave acid resisting method of possessing transparency)				

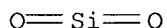
IT 7631-86-9, Silica, uses 12047-27-7, Barium titanate, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (powder; laminate type radio wave acid resisting body and radio wave acid resisting method of possessing transparency)

IT 25038-59-9, Polyethylene terephthalate, properties  
 RL: DEV (Device component use); NUU (Other use, unclassified); PRP (Properties); USES (Uses)  
 (support plate, transparent; laminate type radio wave acid resisting body and radio wave acid resisting method of possessing transparency)

IT 50926-11-9, ITO  
 RL: DEV (Device component use); NUU (Other use, unclassified); PRP (Properties); USES (Uses)  
 (transparent; laminate type radio wave acid resisting body and radio wave acid resisting method of possessing transparency)

IT 7631-86-9, Silica, uses 12047-27-7, Barium titanate, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (powder; laminate type radio wave acid resisting body and radio wave acid resisting method of possessing transparency)

RN 7631-86-9 HCAPLUS  
 CN Silica (7CI, 8CI, 9CI) (CA INDEX NAME)

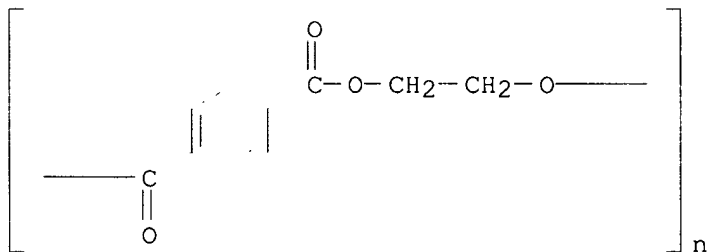


RN 12047-27-7 HCAPLUS  
 CN Barium titanium oxide (BaTiO<sub>3</sub>) (8CI, 9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IT 25038-59-9, Polyethylene terephthalate, properties  
 RL: DEV (Device component use); NUU (Other use, unclassified); PRP (Properties); USES (Uses)  
 (support plate, transparent; laminate type radio wave acid resisting body and radio wave acid resisting method of possessing transparency)

RN 25038-59-9 HCAPLUS  
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI) (CA INDEX NAME)



L72 ANSWER 14 OF 20 HCAPLUS COPYRIGHT 2002 ACS  
 AN 1999:463716 HCAPLUS  
 DN 131:103475  
 TI Heat-reflective thermally insulating sheets of laminates of thermoplastic polymer-coated sheets with metals

IN Monden, Toshiaki; Seki, Masao  
 PA Toray Industries, Inc., Japan  
 SO Jpn. Kokai Tokkyo Koho, 4 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM D06M011-46  
 ICS B60J007-10; B65D081-38; B65G003-02; D06M011-45; D06M011-83;  
 F16L059-08; D06M015-248; D06M017-00  
 CC 40-5 (Textiles and Fibers)  
 Section cross-reference(s): 17, 38  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11200240	A2	19990727	JP 1998-2153	19980108
AB	The heat- <b>insulative</b> sheets comprise sheets coated with thermoplastic polymer compns. optionally contg. compds. exhibiting radio wave reflection amt. .gtoreq.50% and have one or two sides of the sheets <b>laminated</b> with a layer comprising <b>metals</b> and optionally having radio wave reflection amt. .gtoreq.50%. The sheets are useful for storage or transportation of beer, juices, and wine with good temp. retention. A woven sail cloth of <b>polyester</b> fibers was coated with a compn. contg. PVC 100, dioctyl phthalate 60, stabilizer 5, CaCO3 10, and laminated with Al foil using an adhesive to give a heat- <b>insulating</b> sheet exhibiting change of temp. of H2O in a juice can 1.9.degree./6 h on filling the can with H2O at 25.degree., covering the can with the sheet, and exposing the can to sunlight with av. temp. 35.degree..				
ST	<b>polyester</b> fabric PVC aluminum laminate heat <b>insulative</b> ; fabric thermoplastic <b>metal laminate</b> heat <b>insulative</b> ; juice transportation heat <b>insulative</b> sheet; wine transportation heat <b>insulative</b> sheet; beer transportation heat <b>insulative</b> sheet				
IT	<b>Polyesters</b> , uses RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (coatings; heat-reflective thermally <b>insulating</b> sheets of <b>laminates</b> of thermoplastic polymer-coated sheets with <b>metals</b> )				
IT	<b>Laminated materials</b> Textiles Thermal <b>insulators</b> (heat-reflective thermally <b>insulating</b> sheets of <b>laminates</b> of thermoplastic polymer-coated sheets with <b>metals</b> )				
IT	<b>Polyester</b> fibers, uses RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (heat-reflective thermally <b>insulating</b> sheets of <b>laminates</b> of thermoplastic polymer-coated sheets with <b>metals</b> )				
IT	<b>Metals</b> , uses RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses) (heat-reflective thermally <b>insulating</b> sheets of <b>laminates</b> of thermoplastic polymer-coated sheets with <b>metals</b> )				
IT	Beer Fruit and vegetable juices Wine				

(storage or transportation of; heat-reflective thermally insulating sheets of laminates of thermoplastic polymer-coated sheets with metals for)

IT Plastics, uses  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (thermoplastics, coatings; heat-reflective thermally insulating sheets of laminates of thermoplastic polymer-coated sheets with metals)

IT 1314-13-2, Zinc oxide, uses 7631-86-9, Silicon oxide, uses  
 RL: MOA (Modifier or additive use); USES (Uses) (additive; heat-reflective thermally insulating sheets of laminates of thermoplastic polymer-coated sheets with metals)

IT 13463-67-7, Titanium oxide, uses  
 RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses) (additive; heat-reflective thermally insulating sheets of laminates of thermoplastic polymer-coated sheets with metals)

IT 9002-86-2, PVC 9002-88-4, Polyethylene 9003-07-0, Polypropylene 24937-78-8, Ethylene-vinyl acetate copolymer  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (coating; heat-reflective thermally insulating sheets of laminates of thermoplastic polymer-coated sheets with metals)

IT 7429-90-5, Aluminum, uses  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses) (laminates with PVC-coated polyester fabrics; heat-reflective thermally insulating sheets of laminates of thermoplastic polymer-coated sheets with metals)

IT 7631-86-9, Silicon oxide, uses  
 RL: MOA (Modifier or additive use); USES (Uses) (additive; heat-reflective thermally insulating sheets of laminates of thermoplastic polymer-coated sheets with metals)

RN 7631-86-9 HCAPLUS  
 CN Silica (7CI, 8CI, 9CI) (CA INDEX NAME)

O=Si=O

L72 ANSWER 15 OF 20 HCAPLUS COPYRIGHT 2002 ACS  
 AN 1995:849648 HCAPLUS  
 DN 123:342818  
 TI Sheet materials contg. metallic coating layers with interference colors  
 IN Okumura, Haruichiro; Negishi, Takao  
 PA Toray Industries, Japan  
 SO Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM D06M011-83  
 ICS B32B007-02; B32B009-00; B32B015-04; D06Q001-04  
 ICI D06M101-32  
 CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 40

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07189122	A2	19950725	JP 1993-335130	19931228
	JP 3198768	B2	20010813		
AB	The title sheets with interference colors comprise sheet <b>substrates</b> , successively <b>laminated</b> with (A) reflective <b>metal</b> films composed of .gtoreq.1 <b>metals</b> selected from Ti, Ni, Co, and Pt, (B) transparent <b>metal layers</b> , and (C) translucent <b>metal</b> films. Thus, <b>PET</b> fabric was vapor deposited with Ti, SiO, and Cr successively, heated at 170.degree. for 2 min, coated with di-Me polysiloxane, and heated at 130.degree. for 2 min to give an iridescent test piece.				
ST	interference color sheet metal layer				
IT	Films (sheet materials with iridescent interference color with reflective metal layers, transparent metal layers, and translucent metal layers)				
IT	<b>Polyester</b> fibers, uses RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses) ( <b>substrates</b> ; sheet materials with iridescent interference color with reflective <b>metal layers</b> , transparent <b>metal layers</b> , and translucent <b>metal layers</b> )				
IT	1312-43-2, Indium oxide (In2O3) 1344-28-1, Aluminum oxide (Al2O3), uses 7429-90-5, Aluminum, uses 7440-02-0, Nickel, uses 7440-06-4, Platinum, uses 7440-21-3, Silicon, uses 7440-22-4, Silver, uses 7440-32-6, <b>Titanium</b> , uses 7440-47-3, Chromium, uses 7440-48-4, Cobalt, uses 7440-57-5, Gold, uses <b>7631-86-9, Silicon dioxide</b> , uses 7783-40-6, Magnesium fluoride (MgF2) 12137-20-1, <b>Titanium monoxide</b> 13463-67-7, <b>Titanium dioxide</b> , uses 18282-10-5, Tin oxide (SnO2) 50926-11-9, ITO 113443-18-8, Silicon oxide (SiO) RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (sheet materials with iridescent interference color with reflective metal layers, transparent metal layers, and translucent metal layers)				
IT	<b>7631-86-9, Silicon dioxide</b> , uses RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (sheet materials with iridescent interference color with reflective metal layers, transparent metal layers, and translucent metal layers)				
RN	<b>7631-86-9 HCAPLUS</b>				
CN	Silica (7CI, 8CI, 9CI) (CA INDEX NAME)				

O=Si=O

L72 ANSWER 16 OF 20 HCAPLUS COPYRIGHT 2002 ACS

AN 1995:954798 HCAPLUS

DN 123:347478

TI **Metal** foils or **laminates** precoated with  
vapor-deposited layers and an adhesion-promoting layer  
IN Chiang, Shih-Kao; Prokop, Mary K.; Kalnoki-Kis, Tibor  
PA Gould Electronics Inc., USA  
SO Eur. Pat. Appl., 26 pp.  
CODEN: EPXXDW

KATHLEEN FULLER EIC 1700/LAW LIBRARY 308-4290

DT Patent  
 LA English  
 IC ICM C23C028-00  
 ICS C23C016-56; B32B015-20  
 CC 56-6 (Nonferrous Metals and Alloys)  
 Section cross-reference(s): 42, 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 678596	A1	19951025	EP 1995-302699	19950421
	R: FR, GB, IT				
	CA 2147334	AA	19951023	CA 1995-2147334	19950419
	BR 9501605	A	19951219	BR 1995-1605	19950420
	AU 9517826	A1	19951102	AU 1995-17826	19950421
	CN 1112877	A	19951206	CN 1995-104712	19950421
	JP 08041625	A2	19960213	JP 1995-97326	19950421
	US 5709957	A	19980120	US 1996-713100	19960916
	US 6248401	B1	20010619	US 1997-846080	19970425
PRAI	US 1994-232820	A	19940422		
	US 1996-713100	A3	19960916		

OS MARPAT 123:347478

AB **Metal** foils (esp. Cu foils for elec. printed circuits) are typically precoated with vapor-deposited Zn, coated with SiO<sub>2</sub> or Al<sub>2</sub>O<sub>3</sub>, and treated with an adhesion-promoting top layer (esp. organosilane or polymer resin), and are suitable for manuf. of **laminates**. The foils can be precoated on one or both sides, and can be coated with elec. **insulating** top layer over the adhesion-promoting layer. The Cu foils manufd. by electrodeposition and finished by the precoating can be bonded to epoxy-type boards for elec. printed-circuit applications.

ST copper foil precoating bonding elec circuit; zinc coating **metal** foil bonding **lamine**; organosilane bonding **metal** foil **lamine**; epoxy bonding copper foil precoating silane

IT **Metals**, processes

RL: PEP (Physical, engineering or chemical process); PROC (Process) (coated; foils precoated with vapor-deposited and adhesion-promoting layers for **lamination**)

IT Polymers, processes

RL: PEP (Physical, engineering or chemical process); PROC (Process) (coating interlayers; **metal** foils precoated with vapor-deposited and adhesion-promoting polymer layers for **lamination**)

IT Epoxy resins, processes

Polyesters, processes

RL: PEP (Physical, engineering or chemical process); PROC (Process) (**lamination** with; **metal** foils precoated with vapor-deposited and adhesion-promoting polymer layers for **lamination**)

IT **Lamination**

(**metal** foil to dielec. strip; foils precoated with vapor-deposited and adhesion-promoting layers for **lamination**)

IT Electric **insulators** and Dielectrics

(coatings, on foils; **metal** foils precoated with vapor-deposited and adhesion-promoting polymer layers for **lamination** or elec. **insulation**)

IT Silanes

RL: PEP (Physical, engineering or chemical process); PROC (Process) (organo-, interlayer; foils precoated with vapor-deposited **metal** and adhesion-promoting organosilane layers for **lamination**)

IT Electric circuits

(printed, boards, laminated; copper foils precoated with vapor-deposited and adhesion-promoting polymer layers for lamination or elec. **insulation**)

IT 78-10-4 2530-83-8, 3-Glycidoxypopyltrimethoxysilane  
 RL: PEP (Physical, engineering or chemical process); PROC (Process)  
 (adhesion promoter with; copper foils precoated with vapor-deposited **metal** and adhesion-promoting organosilane layers for **lamination**)

IT 7429-90-5, Aluminum, processes 7439-95-4, Magnesium, processes 7439-96-5, Manganese, processes 7440-02-0, Nickel, processes 7440-22-4, Silver, processes 7440-31-5, Tin, processes 7440-32-6, **Titanium**, processes 7440-47-3, Chromium, processes 7440-48-4, Cobalt, processes 7440-74-6, Indium, processes  
 RL: PEP (Physical, engineering or chemical process); PROC (Process)  
 (coating interlayer; copper foils precoated with vapor-deposited **metal** and organosilane layers for **lamination**)

IT 1344-28-1, Alumina, processes 7631-86-9, **Silica**, processes  
 RL: PEP (Physical, engineering or chemical process); PROC (Process)  
 (coating; **metal** foils precoated with **metal** and oxide and adhesion-promoting layers for **lamination**)

IT 7440-66-6, Zinc, processes  
 RL: PEP (Physical, engineering or chemical process); PROC (Process)  
 (coating; **metal** foils precoated with vapor-deposited zinc and adhesion-promoting layers for **lamination**)

IT 7440-50-8, Copper, processes  
 RL: PEP (Physical, engineering or chemical process); PROC (Process)  
 (lamination; foils precoated with vapor-deposited zinc and adhesion-promoting layers for lamination)

IT 7631-86-9, **Silica**, processes  
 RL: PEP (Physical, engineering or chemical process); PROC (Process)  
 (coating; **metal** foils precoated with **metal** and oxide and adhesion-promoting layers for **lamination**)

RN 7631-86-9 HCAPLUS  
 CN Silica (7CI, 8CI, 9CI) (CA INDEX NAME)

O=Si=O

L72 ANSWER 17 OF 20 HCAPLUS COPYRIGHT 2002 ACS  
 AN 1991:67429 HCAPLUS  
 DN 114:67429  
 TI Vapor-deposited films released from anodized metal substrates, especially for bonding to heat-sensitive parts  
 IN Rosenfeld, Aron Marcus; Smits, Paul  
 PA Alcan International Ltd., Can.  
 SO Eur. Pat. Appl., 12 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 IC ICM C23C028-00  
 ICS C25D011-02; C23C014-08  
 CC 56-6 (Nonferrous Metals and Alloys)  
 Section cross-reference(s): 38, 73  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	EP 381509	A1	19900808	EP 1990-301083	19900202



R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL  
 US 5156720 A 19921020 US 1989-306505 19890203  
 JP 02290960 A2 19901130 JP 1990-24993 19900202  
 BR 9000472 A 19910115 BR 1990-472 19900202

PRAI CA 1989-589923 19890202

AB Anodized **layers** on refractory **metal** (Ta, Nb, Zr, Hf, or Ti) or alloy **substrates** (esp. in the presence of a fluoride in the bath to decrease adhesion) are vapor deposited and then mech. sepd., and can be bonded to other **substrates** not suitable for vapor deposition (esp. plastics). The anodized films are optionally coated with multiple layers for optical applications before detachment and rebonding. The process is suitable for continuous operation esp. by using a rotating drum app., and/or for manuf. of laminated composites. Thus, Ta-coated Al foil was anodized to form 61.9-nm Ta<sub>2</sub>O<sub>5</sub> film, and then coated with alternating SiO<sub>2</sub> and TiO<sub>2</sub> films optimized for high reflectance at the wavelength of 550 nm. The coated foil was laminated with a **polyester** sheet, and the anodized Al foil was peeled away to expose the reflective film on the **polyester**.

ST coating anodized **metal lamination**; polymer vapor coating film bonding; optical coating lamination **polyester**

IT Paper

Textiles

(coatings for, rebonding of high-temp. from anodized metal substrates detached)

IT **Lamination**

(films from detached coatings on anodized **metal** substrates for)

IT 16984-48-8, Fluoride, uses and miscellaneous

RL: USES (Uses)

(anodized and coated layers with, for detachment and rebonding)

IT 7429-90-5, Aluminum, uses and miscellaneous 7440-03-1, Niobium, uses and miscellaneous 7440-25-7, Tantalum, uses and miscellaneous 7440-32-6, **Titanium**, uses and miscellaneous 7440-58-6, Hafnium, uses and miscellaneous 7440-67-7, Zirconium, uses and miscellaneous

RL: USES (Uses)

(coating on anodized, detachable, for rebonding on heat-sensitive substrates)

L72 ANSWER 18 OF 20 WPIX COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 1984-136132 [22] WPIX

DNN N1984-100904 DNC C1984-057365

TI Mfg. evaporated film of crystalline thermoplastic resin - by **laminating metal** light reflecting **layer** to thermoplastic polymer.

DC A17 A23 A94 P73

PA (TEIJ) TEIJIN LTD

CYC 1

PI JP 58183245 A 19831026 (198422)\* 5p

ADT JP 58183245 A JP 1982-65428 19820421

PRAI JP 1982-65428 19820421

IC B32B015-08; C08J007-04

AB JP 58183245 A UPAB: 19930925

Process comprises **laminating** a light reflecting **layer** of **metal** on the surface of a base material film made of a thermoplastic polymer. The base material film has static friction coefft. between films below 0.7, limit load above 5 kg and total haze in 25 micron thickness below 3%.

Base material plastic film is pref. of crystalline thermoplastic resin such as **polyester** partic. **PET**, polyethylene-2,6-naphthalene dicarboxylate, polyamide, high density

polyethylene, isotactic polypropylene. Metal is e.g. Ag or Al. The biaxial orientation film is pref. obt'd. by adding fine particles of inert material such as **titania**, **silica**, aluminosilicate, CaCO<sub>3</sub>, Ca phosphate to the base material, forming into film and drawing biaxially.

Film is useful for solar film, ID card, microfilm, transparent heat **insulating** film, film for protection of window glass, etc. The film has enhanced lustre, clearness of specular image and smoothness.

O/O

FS CPI GMPI

FA AB

MC CPI: A11-C04B; A12-S06B

L72 ANSWER 19 OF 20 WPIX COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 1979-83096B [46] WPIX

TI **Laminated** prod. having high electroconductivity - prepd. by sandwiching **metal** film **layer** and transparent **substrate** between layers of high refractivity transparent dielectric film.

DC A23 A32 A94 P73

PA (TEIJ) TEIJIN LTD

CYC 1

PI JP 54127990 A 19791004 (197946)\*

JP 61009143 B 19860320 (198616)

PRAI JP 1978-35569 19780329

IC B32B007-02; B32B009-00; B32B015-08; B32B033-00

AB JP 54127990 A UPAB: 19930901

**Metal** film **layer** (e.g. of Ag or Ag-Cu alloy, of thickness 50-500 angstroms) and a transparent **substrate** (e.g., **PET**, polycarbonate, etc.) are sandwiched between layers of highly refractive transparent dielectric film (e.g. TiO<sub>2</sub> derived, e.g. from an alkyl **titanate**, **SiO<sub>2</sub>** or **ZnO**),  $\geq 1$  layer of which comprises a layer formed physically of thickness  $\leq 100$  angstroms in direct contact with the **metal** film **layer** and a layer formed chemically of thickness  $\geq 30$  angstroms.

Laminated prods. having high electroconductivity, selective light transmission and high durability are prepd. inexpensively.

FS CPI GMPI

FA AB

MC CPI: A09-A02; A09-A03; A11-B09D; A12-S06C

L72 ANSWER 20 OF 20 HCAPLUS COPYRIGHT 2002 ACS

AN 1977:553053 HCAPLUS

DN 87:153053

TI Stampable **thermoplastic** sheet reinforced with multilength fiber

IN Segal, Leon

PA Allied Chemical Corp., USA

SO U.S., 13 pp.

CODEN: USXXAM

DT Patent

LA English

IC B32B005-16

NCL 428283000

CC 37-2 (Plastics Fabrication and Uses)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4044188	A	19770823	US 1975-564019	19750401
PRAI	US 1972-293975		19721002		
AB	A 3-layer <b>laminated</b> consisting of 2 outer layers of <b>thermoplastic</b> resin contg. short glass <b>fibers</b> and a				

particulate filler, and a core layer of glass fiber mat, was prepd., preheated, and rapidly stamped on metal forming equipment at low temp. to give uniform moldings with good mech. properties and improved surface smoothness. Thus, sheets prepd. from mixts. of nylon 6 [25038-54-4] pellets 38.9, kaolin filler (av. particle size 10 .mu.) 38.9, and short glass fibers (length 1/8 in.) 22.2% were compression molded as the 2 outer layers of a 3-layer laminate in which a glass mat formed the core layer. The molding was carried out at 100 psi and 270.degree. and the composite sheet contained nylon 35.5, kaolin 35.5, short glass fiber 20.2, and glass mat reinforcement 8.8%. The laminate was preheated to 270.degree. and shaped in a deep drawing press at 140.degree. in 10 sec at 800 psi. After cooling, the surface roughness was .1toreq.55 .mu.in.

- ST nylon reinforced deep drawing; glass fiber laminate drawing
- IT **Kaolin**, uses and miscellaneous
  - RL: USES (Uses)
  - (nylon reinforced by glass fibers and, cold drawing of laminates of)
- IT Glass fibers, uses and miscellaneous
  - RL: USES (Uses)
  - (plastics reinforced by, cold drawing of laminates of)
- IT Novaculite
  - RL: USES (Uses)
  - (poly(ethylene terephthalate) reinforced by glass fibers and, cold drawing of laminates of)
- IT Molding of plastics and rubbers
  - (cold-drawing, of glass fiber-reinforced laminates)
- IT 9003-07-0 25038-54-4, uses and miscellaneous 25038-59-9, uses and miscellaneous
  - RL: USES (Uses)
  - (glass fiber-reinforced, cold drawing of laminates of)
- IT 14807-96-6, uses and miscellaneous
  - RL: USES (Uses)
  - (polypropylene reinforced by glass fibers and, cold drawing of laminates of)